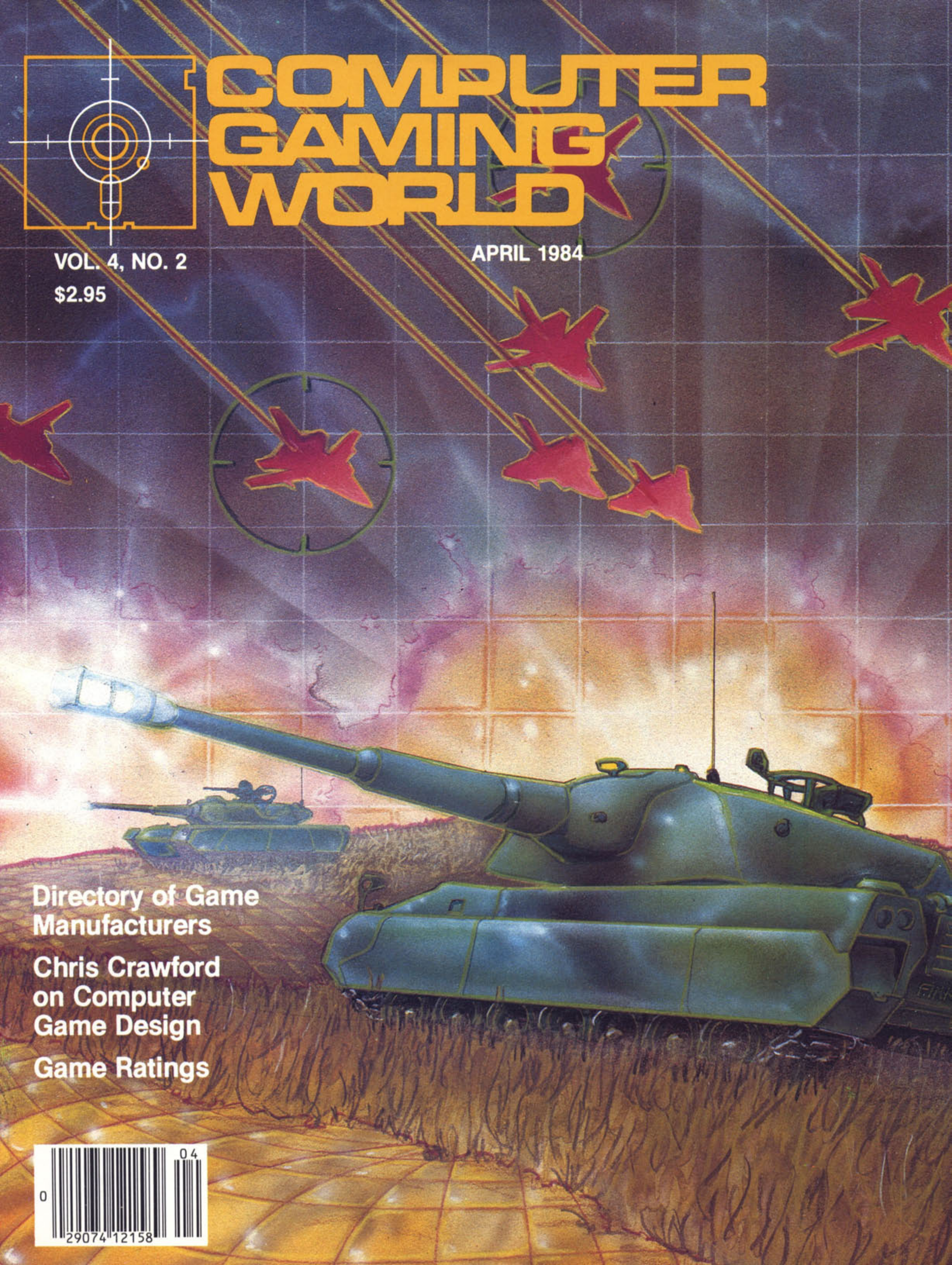
COMPUTER GAMING WORLD

VOL. 4, NO. 2

$2.95

APRIL 1984



Directory of Game Manufacturers

Chris Crawford on Computer Game Design

Game Ratings

0 29074 12158 04



Dreadnoughts



The icy waters of the north Atlantic churn once more under the prow of mighty warships. You maneuver your task forces on both the strategic and tactical levels in this exciting new computer wargame recreating early naval surface action in the European Theatre of WWII.

Features include detailed data for over 40 major warships, attack and reconnaissance air units, convoys, radar displays, realistic combat resolution and two-player or solitaire versions.

48K Disk available for Apple® II, II+ & IIe for $30
Playing time: 1½ hours; Advanced complexity level

Panzer-Jagd





The endless Russian steppe trembles again with the rumble of invading panzers, and this time you are in command! Your units include platoons of Panthers and PzKw III's with infantry support, all maneuvering over an ever-changing battlefield map. Off-map artillery support is also available to help you combat the hordes of Russian units.

Not just an arcade shoot'em up, **Panzer-Jagd** requires careful tactical planning and, above all, a determination to win. Hi-res graphics and sound effects.

Cassette for Atari® (32K) and Commodore 64®, $25
48K Disk for Atari® Home Computers, $30
64K Disk for Commodore 64®, $30
Playing time: 1-4 hours; Intermediate complexity level



Under Southern Skies



You, as Kapitän of the K.M. Graf Spee, are on the prowl in the stormy seas of the south Atlantic in December, 1939. Your mission is to wreak havoc on British merchant shipping while avoiding contact with the superior Royal Navy forces in the area.

Under Southern Skies gives you highly detailed data on numerous German and British warships of WWII involved in the south Atlantic campaign of 1939. Features include both strategic and tactical levels as well as options for one or two players.

48K Disk for Apple® II, II+ & IIe for $25
Playing time: 1 hour; Intermediate complexity level

A World of Games

microcomputer games®

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These and many other fine Avalon Hill Microcomputer Games are available at leading computer game stores everywhere . . . or call Toll-free: **1 (800) 638-9292** for the name of a store near you. Ask for Operator **W.**

Gulf Strike





Tense land, air and sea combat in the explosive Persain Gulf region in the not-too-distant future. Based on the popular Victory Games' boardgame of the same name, **Gulf Strike** features scores of different unit types and formations on the strategic level.

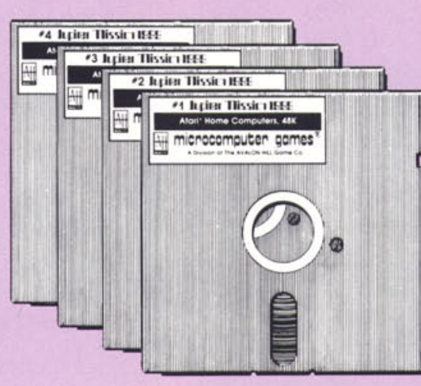
Complete orders of battle for over a dozen nations allow you and a friend to explore all military aspects of this highly volatile area, where every minor confrontation can carry global repercussions. Solitaire option included.

48K Disk for Atari® Home Computers, $25
Playing time: 2 hours; Advanced complexity level

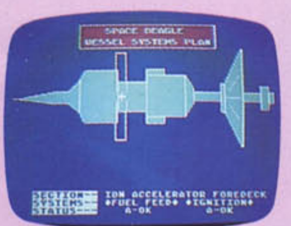
Jupiter Mission 1999™

Scott Lamb's Interactive Space Fantasy Adventure

Jupiter Mission 1999 is Avalon Hill's Trademark Name for its Microcomputer Space Adventure Role Playing Game.



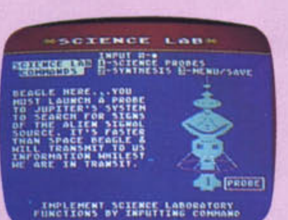




Ship Status Display:
Damage report



Navigation Display:
Used to plot course



Science Lab Display:
Probe report



Science Lab Display:
Jupiter system diagramatic

® Trademark of Warner Communications

RRRING!!! RRRING!!! RRRING!!!

Too early on a chilly January morning, I was jarred awake by the noxious blaring of my traitorous doorbell. As I moved to accost the unknown aggressor, with the full force of semi-conscious wrath, I pulled on my robe and lost my dignity to the pain of a stubbed toe. Now fully awake, I opened the door, prepared to educate the mysterious interloper on the meaning of manners. My determination to this end was somewhat shattered when I saw two large men clad in long overcoats and wide-brimmed hats. Instinctively, I tried to slam the door. My retreat to safety was denied by the advance of the strangers. Before I could protest their entry, my vision was drawn to the shining silver badges that hung from their now unfolded wallets. They were government agents.

Hesitantly, trying to remember any crimes that I had ever committed, I invited them into my home. At their request, I produced my driver's license and other forms of identification. After examining these credentials, they asked me to pack a bag for an extended journey. After some protest and argument, I was made to understand that my options in this matter were less than limited. My country needs me, they said—with the clear implication that either I pack and dress or I take an extended journey in my robe.

This is how my adventure began. From my cold apartment, I was taken to a towering vehicle for an emergency mission to Jupiter. My very life on the line and, possibly, the survival of the planet Earth as well, and only God knows what other kind of perils await.

JUPITER MISSION 1999 is a highly detailed role-playing space adventure game that includes challenging arcade segments and mystifying puzzles. **Four separate program disks** are enclosed to test the creative imagination of the advanced computer gamer. **JUPITER MISSION 1999** is ready to run on your Atari® Home Computer with 48K memory and one disk drive. **$50.00**

Available at leading computer software dealers, or call toll-free for further information: 1-800-638-9292

microcomputer games®

A Division of **The Avalon Hill Game Company**

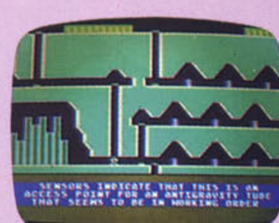
4517 HARFORD ROAD, BALTIMORE, MD 21214 1-800-638-9292



Porthole View
of Jupiter and a moon



Lander Approach Display:
note descending spaceship


Exploring an
Alien Complex


Exploring an
Alien Space Station

Joystick required

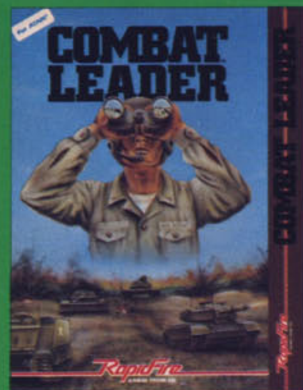
FROM SSI, MORE OF THE BEST STRATEGY GAMES FOR YOUR

A T A R I®



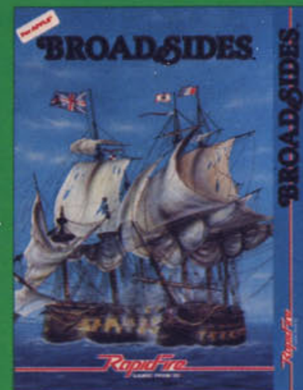


This is the definitive business game on the financing and building of the American Transcontinental Railroad from 1870-1900. For up to 8 players, it is exhaustive in detail and realism, fun, and challenging. Also a great educational tool. On 40K disk. $39.95.



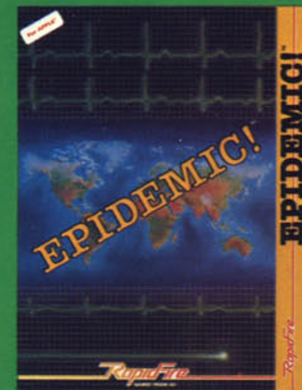


Here's a real-time wargame that gives you the speed of arcade games and sophistication of strategy games. One of the finest tank-battle games ever made, it lets you choose from over 70 tanks, from the Nazi Tiger to the Abrams M-1. On 48K disk & cassette. $39.95.



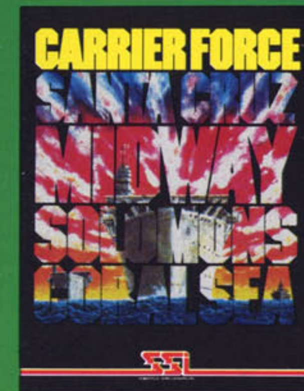


The romantic and adventurous age of fighting sail is here again as you command an 18th-century warship – of your own design if you wish. You'll make all the military decisions a real captain must make. On 48K disk. $39.95.





Space-spawned microbes have infected Earth, afflicting it with the largest, most deadly epidemic known to man! Use all the means at your disposal – interferon, gene splicing, even nuclear bombs – to save the world. Your are her only hope! On 48K disk. $34.95.





This is the historical simulation of four great World War II carrier battles in the Pacific. It is so thorough and realistic, every last ship and plane is taken into account! It is one monster of a game in scale and complexity, yet it's so easy to play. On 40K disk. $59.95.

ATARI is a registered trademark of Atari, Inc.

Screen displays are not necessarily from the Atari®. These games are for the Atari® Home Computers.

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STRATEGIC SIMULATIONS INC

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Vol. 4 No. 2 **April 1984**

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Psalm 9: 1-2

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FEATURES

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INSIDE THE INDUSTRY

by Dana Lombardy

In the December, 1983 issue we gave you the results of the survey regarding how the readers of *CGW* buy computer games. Most of you (55.1%) said you buy fewer computer games now, and that you're more selective about the ones you do buy.

Last issue (February, 1984), we published the results of a survey that asked you what kinds of *non*-computer games (wargames, role-playing games, etc.) you played before and after you became involved with computer games. Most of you (46.9%) still play many of the same non-computer games as you did before you became a computer hobbyist, but almost one-third of you (31.0%) have stopped playing these other types of games and now play computer games exclusively.

This time our survey asks you what types of computer games you play regularly, and what features you like best in computer games.

For the purposes of this survey, let us say that there are roughly five categories of computer games: *adventure* (role-playing; *wargame; arcade; abstract; and sports* or *other strategy.*

Adventure computer games would include such games as *Zork; Ultima; Maces & Magic; Wizardry; Temple of Apshai; Questron; Suspended;* and *Castle Wolfenstein* (which also has arcade features).

Computer wargames include historical and science fiction battle simulations, such as: *Robotwar; Cosmic Balance; Warp Factor; Computer Diplomacy; Eastern Front; Battle of Shiloh; Computer Ambush; Combat Leader; Close Assault; Bomb Alley; TAC; Paris in Danger; Legionnaire; Eagles; Operation Whirlwind;* and *North Atlantic '86.*

Computer arcade games include, as only a very small sampling: *Choplifter; Lode Runner; Donkey Kong; Pac-Man; Frogger; Centipede; Zaxxon; Flight Simulator; Q-bert; Lunar Leeper; Jawbreaker; Flying Tigers;* and various pinball games.

Abstract computer games include: *Sargon; Fortress; Pensate;* and other chess, checkers, and backgammon style games.

Sports and other strategy computer games include: *Computer Baseball; Computer Football; Championship Golf; Computer Facts in Five; Cartels & Cutthroats; M.U.L.E.;* etc.

Some games have features that could place them in more than one category. For example, *Flying Tigers* has both arcade and wargame features.

The above list is meant to provide a guideline to enable you to answer the following questions.

Use R.I.D. card in the back of magazine to respond to this survey.

Part I (Questions 1 through 5)

Check each category of computer game that you play *at least* five times a month:

1. Adventure
2. Wargame
3. Arcade
4. Abstract
5. Sports/Other

Part II (Question 6)

Put the number of the *one* category of computer game that you play the most (your favorite):

1. Adventure
2. Wargame
3. Arcade
4. Abstract
5. Sports/Other

Part III (Questions 7 through 10)

Check each type of play you're involved in *at least* three times a month:

7. Solitaire (you against the computer)
8. Player vs. Player (you against another player using the same computer)
9. Tele-Gaming (you against another playing or computer in a network using a modem)
10. Spectator Mode (you watch the computer demonstrate or play against itself)

Part IV (Question 11)

Check the *one* type of play that you do most each month (your favorite):

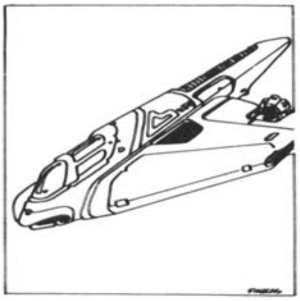
A. Solitaire

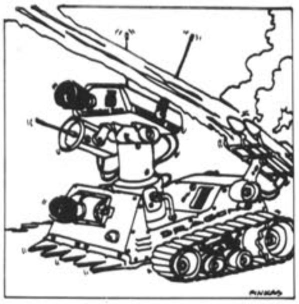
B. Player vs. Player

C. Tele-Gaming

D. Spectator Mode

Thanks for taking the time to tell us the types of computer games you play. The results of this mini-survey will be published in a future column.







Game Playing Aids from Computer Gaming World

COSMIC BALANCE SHIPYARD DISK

Contains over 20 ships that competed in the CGW COSMIC BALANCE SHIP DESIGN CONTEST. Included are *Avenger*, the tournament winner; *Blaze*, *Mongoose*, and *MKVP6*, the judge's ships. These ships are ideal for the gamer who cannot find enough competition or wants to study the ship designs of other gamers around the country. SSI's The Cosmic Balance is required to use the shipyard disk. PLEASE SPECIFY APPLE OR ATARI VERSION WHEN ORDERING. $15.00

ROBOTWAR TOURNAMENT DISKS

Diskette #1 contians the source code for the twelve entrants in CGW's Second Annual Robotwar Tournament. Diskette #2 contains the seventeen entrants in the recently completed Third Annual Robotwar Tournament. Muse Software's ROBOTWAR™ required to use these diskettes. Please specify which diskette when ordering. $15.00 each or $25.00 for both.

CGW BASEBALL DISK

Contains the four teams of the All Star League reported on in 3.3 (AL West All Stars, Al East, NL West, and NL East); the six teams of the 1982 Winter League (see 3.3), the eight teams of the Greatest Baseball Team of All Time Tournament, and a reprint of the results of The GBTOAT tournament from issue 2.3. SSI's Computer Baseball Apple version required to use data disk. Apple version only. $15.00

Send check or money order to: Computer Gaming World, Disk Order Dept., P.O. Box 4566, Anaheim, CA 92803-4566. California residents please add 6% sales tax. Allow 3-4 weeks for delivery.

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Taking a peek

Activision Inc.
2350 Bayshore Frontage Rd.
Mountain View, CA 94043

KABOOM!: The home video machine comes to the home computer. Kaboom is just one of many video cartridge games that Activision and others have translated into home computer format. You play again the computer's mad bomber or a human opponent as you attempt to catch bombs which are tossed with ever increasing speed. Strictly for the arcade fiend. Each of the Activision games is available (or will be) for the Atari, C-64, and Adam/Colecovision systems.

MEGAMANIA: Space Invaders meet your nightmares. Fight off invasions of hamburgers, ice cream sandwiches, radial tires, steam irons and other unspeakable horrors. Nothing new here in terms of design, but the graphics are humorous. If you are a Space Invaders fan, you will like it.

PITFALL: You are Pitfall Harry searching for treasures in a danger filled jungle. Much like B.C.'s Quest for Tires in design elements.

RIVER RAID: Pilot your aircraft up the river blowing up bridges while avoiding helicopters, ships, jets, etc.

Atari Program Exchange
1346 Bordeaux
Sunnyvale, CA 94086

EXCALIBUR: Chris Crawford game set in a fantasy world based on the legend of King Arthur. The large scope of the game includes economics, diplomacy, magic, wars and battles, friendship, loyalty, treachery, etc. Atari. $30.00

Avalon Hill Game Company
4517 Harford Rd.
Baltimore, MD 21214

UNDER SOUTHERN SKIES: A simulation of the exploits and sinking of the German Pocket Battleship Graf Spee. Either solotaire (computer is British) or two player, USS has a strategic as well as tactical game. Nice graphics. Look for a future review. Apple.

SPACE COWBOY: An arcade game in which you must escape from prison and pilot your ship to safety. Good 45° graphic view. Atari.

Blue Chip Software
19818 Ventura Blvd. Suite 204
Woodland Hills, CA 91364

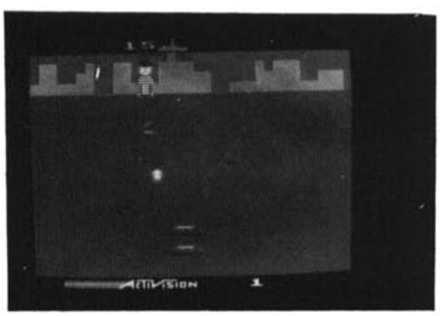
BARON: Real estate simulation game which doubles as an educational vehicle for learning about investment finance. 60 months of real estate trading is compressed into a one hour exercise. Many systems.

Cheapsuit Software
P.O. Box 923
Iowa City, IA 52244

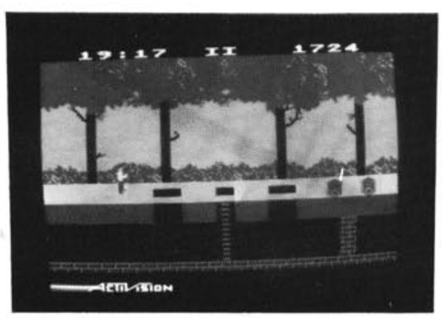
STAR FERRY: A strategy game of passager travel to the stars. With limited capital you, as the owner of a starship company, must build ships, explore for habitable planets, and transport emigrants there. Apple.

Davka Corp.
845 N. Michigan Ave., Suite 843
Chicago, IL 60611

SAMSON AND DELILAH: Arcade game based on the biblical story of Samson bringing down the Philistine temple. C-64 (Apple coming). $24.95.



KABOOM!



PITFALL



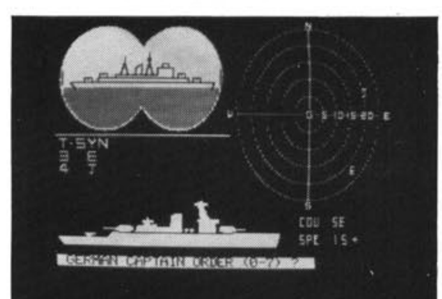
EXCALIBUR



MEGAMANIA



RIVER RAID



UNDER SOUTHERN SKIES

Magnetic Harvest
P.O. BOX 255
Hopkins, SC 29061

GNOSIS VII: Very interesting program. Gnosis is a complex word logic puzzle set within a role-playing scenario. Your goal is to discover the secret names of seven Lords of Power. Check it out. Apple. $19.95.

PLANETMASTER: You are in charge of a sanctuary sattelite and charged with selecting and maintaining six endangered alien species. Variations in the needs of the various species, all coexisting in the same enviroment make for a real challenge. Apple. $24.95.

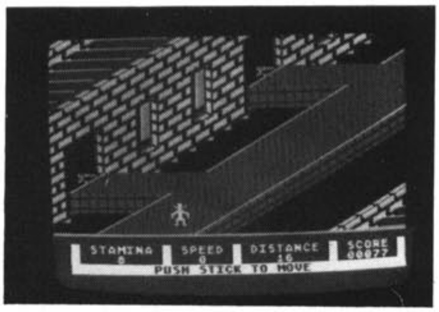
Maximus
6723 Whitter Ave.
McLean, VA 22101

SAFETYLINE: A software movie narrated by Max the Cat which presents safety tips to children. Children are taught how to cross streets safely and what to do when they get lost. Four games reinforce the safety tips. Disk/cassette ($34.95). Cassette only ($29.95).

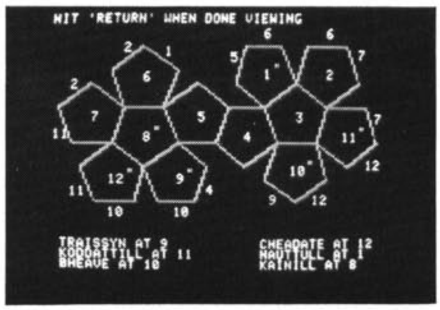
STORYLINE: Clover the Clown guides children though the fairy tales "Rumpelstiltskin" and "The Ugly Duckling". Four games also included. Atari. See "Safetyline" for prices.

Microprose Software
10616 Beaver Dam Road
Hunt Valley, MD 21030

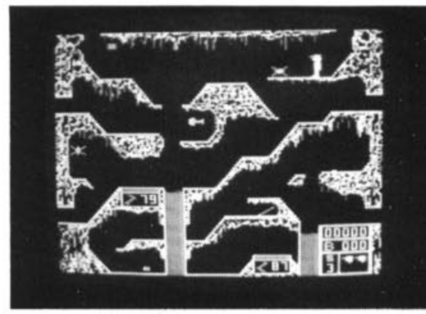
MIG ALLEY ACE: A well done split screen 3–D air combat game. The split screen allows two players to sit in separate cockpits (using one computer). Players can fight one another in F-86's or dogfight cooperatively against MIG-15's. The simulated aircraft are capable of real jet aircraft maneuvers. Atari. $34.95.

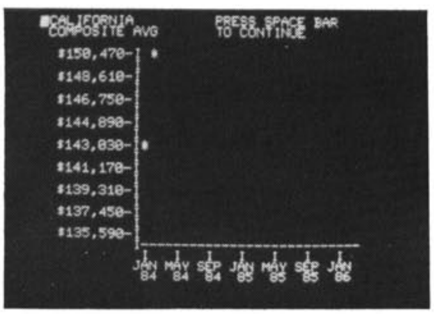


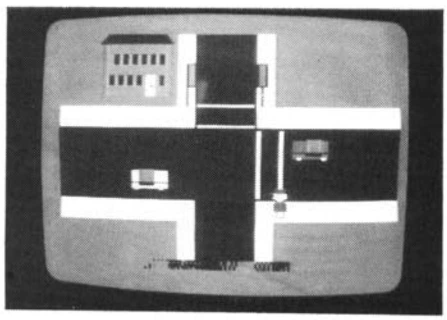
SPACE COWBOY

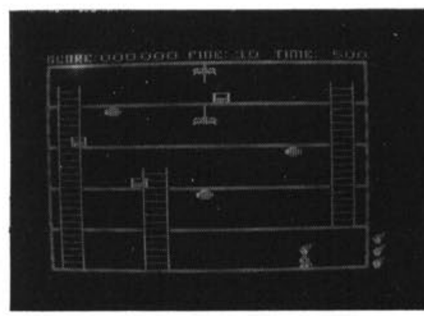


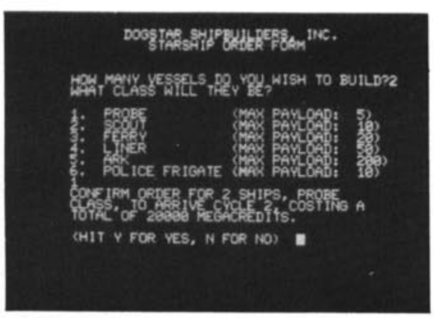
PLANETMASTER


CRISIS MOUNTAIN

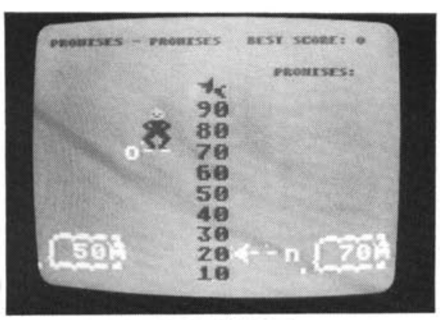

BARON


SAFETYLINE


HALLOWE'EN

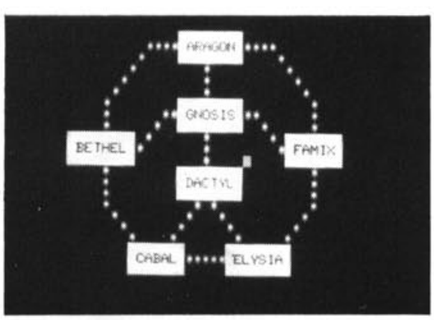


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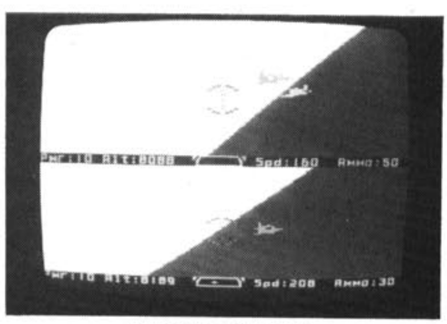

STORYLINE

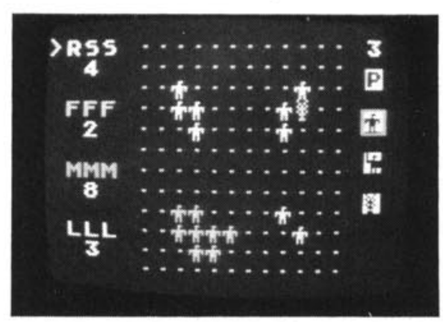


FORBIDDEN QUEST



GNOSIS VII


MIG ALLEY ACE


DAWN OF CIVILIZATION

Micro Lab
2699 Skokie Valley Rd.
Highland Park, IL 60035

CRISIS MOUNTAIN: The orginal Apple version of this game was put out by Synergistic Software. An arcade game that requires strategic planning. You must face a multitude of perils as you seek to defuse terrorist bombs set to blow up the Western Hemisphere. Atari. $35.00.

MicroSPARC Inc.
10 Lewis St.
Lincoln, MA 01773

HALLOWE'EN: Arcade game in which you attempt to survive in a dark mansion on Hallowe'en night. Apple.

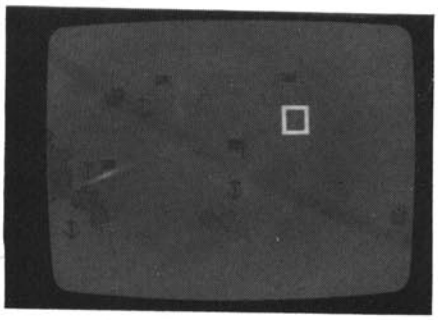
Pryority Software, Inc.
25570 Chiquito Place
Carmel, CA 93923

FORBIDDEN QUEST: Here is something new. FQ is the first in a series of Artext(TM) adventures which combine prose with original art prints. Each game will include 5 8(/2) by 11 prints which contain clues that can be used in solving the adventure. Apple.

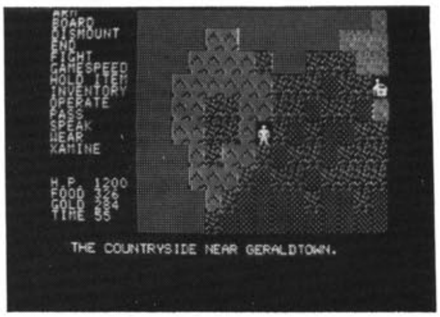
Superware
2028 Kingshouse Rd.
Silver Spring, MD 20904

AFTER PEARL: A strategic level simulation of the War in the Pacific. Scrolling map covers much of the Central and South Pacific. You fight for control of bases in the 40 turn campaign game. Midway and Yamato learning scenarios included. Players move task forces, all combat is controlled by computer. Actual combat resolution is pretty simplistic. Atari.

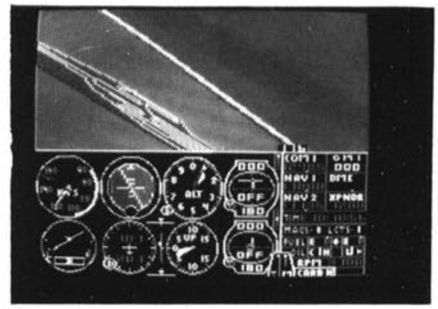
Continued on p. 46



AFTER PEARL



QUESTRON



FLIGHT SIMULATOR II

SO YOU STILL WANT TO WRITE A COMPUTER GAME!



Chris Crawford

Some time ago I wrote an aritcle for *Computer Gaming World* entitled "So You Want to Write a Computer Game." Since the article was written, the computer games industry has undergone many dramatic changes. The eternal truths of 1981 are the outdated misconceptions of 1984. How have the tumultuous events of the past 24 months affected the prospective computer game designer?

Some things have not changed at all. For example, in the previous article I wrote:

> "No great paintings were ever painted with crayons; no great symphonies were ever composed with kazoos; do you really think that you can write a great program with BASIC?"

It is just as true today. Assembly language is still the only development language for serious game designers.

Another constant element is the fickle nature of fame and fortune. Vast wealth has descended upon some designers who were lucky enough to be at the right place at the right time. I know of several very worthy game designers whose brilliant designs just haven't caught on. My own experience has underlined the quirkiness of the marketplace: EASTERN FRONT (1941) has sold very, very well, but LEGIONNAIRE — every bit as good as EASTERN FRONT (1941) plods along with slow sales.

Some of the advice I gave in the original article is even more applicable today. I emphasized the importance of polish, adjuring the designer to "polish, polish, polish" that game until he was absolutely sick of it. Today, I can only add emphasis to the hyperbole of the original article. Computer games have improved in the last two years, and much of the improvement has been the polish. Games like M.U.L.E. raise the stakes for everybody; the market will no longer tolerate slipshod design or lack of polish.

Another factor that is even more important today is originality. Two years ago, I ranted in isolation against the army of soulless clones assailing the games buyer. Now, the consumer has taken up the cry. The most foolish thing you could do right now is attempt to sell another PAC-MAN, SPACE INVADERS, or DEFENDER rip-off. People are utterly sick and tired of that stuff. Even the VidKid, a youngster who review video games in a nationally syndicated column, has taken to complaining about the lack of originality in the current crop of games. There is no point in designing a game unless it is truly original.

Some things have changed a great deal in the last two years. The most important change from the point of view of the game designer is the loss of focus in the machine base. Three years ago, life was simple: you designed for the Apple, period. Two years ago, you had to choose between the Apple and the Atari Home Computer™

But the last twelve months have seen a great deal of confusion. Texas Instruments started coming on strong, then dropped out of the marketplace. Commodore came out of nowhere with their Commodore 64, which quickly became the hottest-selling machine in the marketplace. Then came the Coleco Adam and the IBM PCjr, both of which stirred up intense interest, most of which has been deflated. As of this writing, the C64 and the Atari Home Computer™ are still the dominant machines in the games marketplace, but the sense of confidence has been shattered. Nobody knows what to predict.

Another big change has been slowly creeping up on us for years. The 48K disk-based game is finally the standard. This was always the case with Apple software, but software for other machines, especially the Atari Home Computer™, was frequently designed for 16K of RAM and provided on either a cassette or a ROM cartridge. 48K RAM is now a standard, and the diskette is the best way to distribute the software for this size.

The final big change is in the nature of the software development team. Two years ago, the individual reigned supreme. The tight coding requirement of games for 16K machines gave the individual a great advantage over the team. But the demand for bigger games has made it more difficult for the individual to keep up. More and more, we are seeing software produced by teams. Richard Garriott, Dan Bunten, and Jon Freeman are examples of notable game designers who are really team leaders rather than lonely individuals. Even I, the squawking exponent of rugged individualism, resorted to a team effort to execute EXCALIBUR. As we move to bigger machines, the team may become even more important.

So where does this leave you, the prospective game designer? We are seeing a transition from a cottage industry to the big-time. Three years ago an individual working at home could revolutionize the industry. But, times are changing; it's getting harder for that to happen. I believe that the individual working at home can create a successful game only by (a) working full-time on the effort, or (b) obtaining the assistance of a support organization. Prospective game designers who find this disheartening should console themselves that it is at least a measure of the maturation of our industry.

Chris Crawford heads a game design/research group at Atari, Inc.

Copies of Crawford's original article which appeared in CGW 1.1 are available for $1.00. Send requests to CGW, Box 4566, Anaheim CA 92803-4566, Attention: Reprints

Letters

Please advise me. I have an Apple IIe with an Apple controller card and a Quintron disk drive. When I boot SSI's Computer Quarterback it shows the company's name name and the three options. But, before I can pick one, it moves on and shows characters from the program. I have tried to correct the problem by removing the 80 column card, but have not altered the results.

Cesar Baldemor, Bellflower, CA

The problem that you have had is due to the fact that some early copies of Computer QB do not run on a IIe. The game has since been altered to adjust for the problem. If you send back your disk, SSI will replace it at no cost. SSI wants our readers to know that they have a technical hotline for such problems: 415-964-1200 during normal business hours (Pacific time).

I would like to see more objective criticisms of games, their short comings as well as their strongpoints, even if it means being uncomplimentary to advertizers. Also, print more detailed strategy tips and techniques. Your magazine isn't the only game in town, but it certainly is the best. How about going monthly?

Lee Bishop, Santa Monica, CA

With the limited space available and the number of titles being released on the market, we can very seldom justify giving much space, if any, to games which our reviewers didn't like. The exception to this rule is in the case of feature releases from one of the major software houses which, in our opinion, fails to live up to the quality expected by the game buying public. We would love to publish more strategy tips articles if good ones are submitted. Our writers come from our reader base. In addition to strategy articles we are also looking for more reviews of Avalon Hill games as well as designer's notes articles on the more popular games. Anyone "listening"?

Your newer readers (such as myself) need access to copies of CGW before 2.3. How about a book of all articles published before 2.3?

Lance King, Painesville, OH

That is a possibilty in the future (if there is enough interest. For now, we will provide a photocopy of any article in our out–of–print issues for $1.00.

Since I subscribed to CGW I haven't been disappointed. I am, however, a bit concerned about the attitude among some software firms and dealers that the Atari is a game not worthy of good simulations or business software. Obviously they are wrong. Although the bucks are hard to come by, I usually buy at least one item of software per month. Wake up manufacturers and Dealers!

James B. Phipps, Katy, TX

Have the survey results from INSIDE THE INDUSTRY 4.1 (on wargamers switching to computer games) been communicated to the manufacturers and designers in GAMA? [Ed. Note — GAMA stands for Game Manufacturer's Association of America. GAMA's membership consists primarily of those companies that design strategy board games, role-playing games and other paper media games for serious gamers].

I'm a grognard in the wargaming hobby (20 plus years). I have not bought a board game in 15 months and I have started to dispose of my 200 plus game collection. I would gladly subscribe to a magazine that devotes more space to wargaming and less to fantasy, sci-fi, and arcade material.

James Butters, Rockville, MD

Yes, the staff of CGW meet with members of GAMA at the recent CRAFT, MODEL & COLLECTIBLES show (ex-HIA show). We shared the information that our survey uncovered (namely that 31% of those that used to play board wargames have given them up now that they play computer wargames).

Unfortunately we were not encouraged by the general response from the board game manufacturers. But Avalon Hill has been into computer games for several years and their 1984 releases look pretty good. And Task Force Games has released two games but were more excited about their Civil War game that they expect to release later this year, calling it their "first serious computer wargame".

TSR Hobbies has "discontinued computer games temporarily.... but will be coming back in 1985" according to TSR president Kevin Blume. TSR Hobbies, which gave us DUNGEONS AND DRAGONS™, released 3 computer games in 1983, none of which did that well in the marketplace.

Game Designer's Workshop is working on three games. A sci-fi game based loosely on their board game IMPERIUM, a Civil War game based on the battle of Chickimauga, and a North Africa Campaign game which is the favorite of GDW's Frank Chadwick.

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HOBBY AND INDUSTRY NEWS

Davka Corporation, the Chicago-based producer of bible and religious software, announced the **BIBLE ACTION SERIES**. Two new games, SAMSON AND DELILAH and JERICHO, are the first products in the line. They bring familiar arcade action to the world of the Bible. A dozen games in all are planned, with titles such as FORTY DAYS AND FORTY NIGHTS, MOSES AND THE MOUNTAIN, and DAVID AND GOLIATH.

Avalon Hill is releasing a four disk space fantasy adventure entitled **JUPITER MISSION 1999**. It will run on Atari home computer systems. The advanced look we had at the Hobby Show in Anaheim was impressive. No price listed.

Strategic Simulations will be releasing **50 MISSION CRUSH**, a B-17 role-playing game, for the Apple, Atari, and C-64 in May ($39.95). The monster game **WAR IN RUSSIA** (Apple and Atari) will be released in May with a whooping $79.95 price tag. **RAILS WEST** (Apple & Atari) will be out by the time you read this. C-64 conversions (all now available): Germany 85, RDF, Fortress, Cosmic Balance. Atari conversions for Epidemic and Broadsides are now available.

SORCERER, the second release in Infocom's ENCHANTER series of adventures in the mystic arts, should be on dealer shelves by the time you read this. SORCERER is written by Steven Meretzky, the author of the popular game PLANETFALL.

Infocom also announced that their Techno-Hotline was now in service. The number—617-576-3190—will provide dealers and customers quick answers to problems of a technical nature, though not, they emphasised, for hints or orders.

ZORK IN PRINT....Tor Books of New York are publishing a trilogy of decision–making books based on the ZORK theme. Authored by Infocom's S. Eric Meretzky, the titles are ZORK: The Forces of Krill; ZORK: The Malifestro Quest; and ZORK: The Cavern of Doom. Although the books will feature some of the characters in the ZORK interactive adventures, plots will differ.

Activision, Inc. and **Atari, Inc.**, announced that they have agreed in principle to form a **joint venture company to distribute software electronically** to the home. The venture company's service would use broadcast technology to transmit software to a home receiver that plugs into video computer systems. This service would be extended later for use with home computers. The proposed electronic distribution service would license software from a wide variety of suppliers, including Activision and Atari.

Online database revenues will climb over the **$10 billion** mark in 1994, according to International Resource Development Inc.

It has been said that if automobile technology had advanced at the rate of computer technology over the last 30 years, a Rolls Royce would cost $2.50 and get two million miles to the gallon. True, unless the particular technology one had in mind were that of the GE Fluid Computer, which attempted to use water instead of electrons for switching circuits....or, the Interplex round teleprinter computer that could multiply 12 × 12 and never get anything but 143 ... or, the RCA BIZMAC, a vacuum tube dinosaur that took so long to build it was obsolete before it was done (it was so big that its operators wore roller skates.) These bits of **trivia and other arcame facts** about computerdom are the subject of a new book entitled **THE NAKED COMPUTER**, available now in bookstores. Some samples:

• The first computer "bug" was actually a moth that met its demise in a relay of the Mark I analyzer at Harvard. The carcass is still taped to a page in a log book at the Navy museum in Virginia.
• "Our products now are known/In every zone"....is just one line from the official IBM song, "Ever Onward,"not published by the company in 25 years but reprinted in its entirety in the book.
• The most well–traveled Dungeons and Dragons player: Han Shan S. Scott, an 18–year–old student at San Jose State College, who racked up 45,000 minutes of unauthorized computer and telephone time playing games on computers as far away as Taiwan and Sweden. He was arrested in May 1981 playing Canyon Bomber.
• A scientist at Hughes once inscribed 100,000 angels on the head of a pin; he says that now he could inscribe over 500 million. The original 100,000 were lost when the pin rolled into a crack in the floorboards.
• The most famous artificial intelligence program, ELIZA, was written by an M.I.T. professor to prove how difficult meaningful communication between humans and machines would be to achieve. He had ELIZA mimic the responses of a psychiatrist to show how ludicrous such conversation could get. Instead, the program was lauded by the psychiatric community as a boon to therapy. The M.I.T. professor was so disenchanted he became a severe critic of both the psychiatric community and the computer business.

The hardcover book, 335 pages, is broken into 20 chapters with subject matter ranging from industry personalities and computer firsts to robotics, artificial intelligence, and computer art. An extensive index is included. It is available in hardcover only, for $15.95.

More than 170 software publishers expect 1984 to bring good to excellent profits in software, according to a survey of 215 publishers by TALMIS, Inc. Forty–four percent of respondents stated that unit sales increased by 100% or more during the previous twelve months. Fourteen percent stated that unit sales increased by more than 150%! And not one publisher reported decreasing sales.

International Grandmaster and U.S. Chess Champion Larry Chritiansen, 28, has concluded an endorsement agreement with CYBER Enterprises, manufacturer and distributor of CYBERCHESS, chess improvement system compatible with most personal computers. CYBERCHESS is available for the IBM PC,

PCXT, PC Jr. and most MSDOS compatibles; TRS-80 and Tandy 2000; Apple; and C-64. CYBER Enterprises, 17517 Fabrica Way -K, Cerritos, CA 90701

Dr. Albert Mehrabian, a prominent U.C.L.A. research psychologist, and his research associate, Warren J. Wixen, have just completed a **research project on video game popularity**. Their findings are explained in the December issue of Psychology Today magazine. The researchers believe the best way to predict the commercial success of a game is to examine the emotional impact that the games have on players. Using the emotional impact the researchers were able to develop several psychological techniques that allow them to predict the success of a video game. Some of the emotional dimensions that related to the success of a game were arousal and dominance (feeling of being in control). When the games elicited a high state of both arousal and dominance, they were much more likely to be popular and commercially successful. The aggression or "Shoot em up" emotion that many games created was not a factor in the success of a game. Women, surprisingly enough, enjoyed playing video games more than men. The researchers concluded that they do not play as much as men because the manufacturers have not created games that appeal to them. Women desired games that were slightly less arousing and more pleasant; games like Frogger as opposed to Defender. The researchers finally state that manufacturers should design future games with a much broader emotional appeal.

Xor Corporation has obtained the first microcomputer software license granted by the National Football League Properties. The product, tentatively called **THE NFL CHALLENGE**, will run on the IBM PC, PCXT, PC Jr. and other compatable microcomputers. it will be released at the start of the 1984 NFL season. The challenge consists of first allocating resources to build an NFL team, and than creating coaching strategies to win NFL games against the computer, representing any designated NFL team.

ADVENTURE INTERNATIONAL, headed by Scott Adams, has signed a long-term licensing agreement with **MARVEL ENTERTANINMENT GROUP**. The terms of the multi-million dollar royalty agreement specify that ADVENTURE INTERNATIONAL will create and market a series of at least twelve home computer graphic adventure games featuring the entire MARVEL UNIVERSE. MARVEL will create a special series of companion comic books tentatively called Quest Probe to tie into these programs. Initial release is targeted for late Spring, 1984.

Warner Software, Inc., the recently formed subsidiary of Warner Publishing, Inc., has acquired a substantial interest in First Star Software.

THORN EMI Video is marketing its first games for the Apple II and IIe computers. The company released a new game, **LIBERATOR**, as well as its best-selling **SUBMARINE COMMANDER** on diskette for the Apple computers. In addition, THORN EMI will release on diskette for the Atari computers its popular game, **COMPUTER WAR**, based upon the film, "War Games."

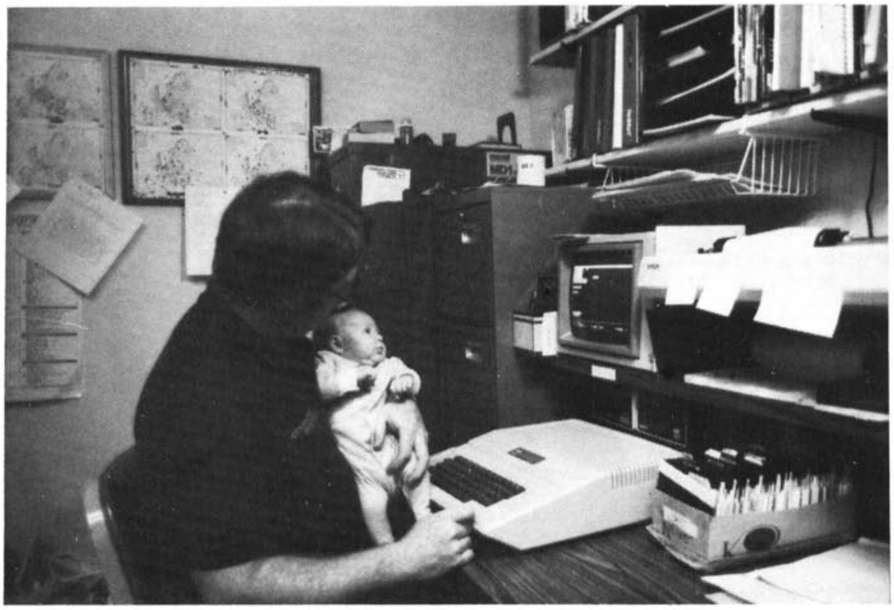
DATAMOST announced that it was moving to larger quarters. The new address will be 20660 Nordhoff Street, Chatsworth, CA 91311.

The **NATIONAL CBBS DIRECTORY** is now available to all computer users who communicate over the telephone. This directory contains over 1000 computer bulletin board telephone numbers which are organized in numeric sequence. The directory also contains a key field which identifies relevant information such as the BBS type, its baud rate, operation hours, and special comments specific to each BBS. Many of the bulletin boards contain programs which you can download into your system at no charge to you. The directory is available for $2.00 post paid from: Thomas Wnorowski, 3352 Chelsea Circle, Ann Arbor, MI 48104.

In a departure from the home entertainment computer software upon which **Synapse** has built its reputation, president Ihor Wolosenko announced the formation of a new product division. The first program in a series of **personal healthware titles** from this division is **RELAX(TM)**, a stress reduction system designed to offer a complete stress reduction system for use with home computers. Using biofeedback, RELAX allows you to monitor your stress levels by representing muscle tension graphically on your computer monitor. The RELAX workbook that is included with the software helps you to understand your reactions to stress and also provides suggestions for managing and reversing those reactions. An audio tape guides you into deep relaxation. RELAX also allows you to program in subliminal messages that will reinforce your relaxation responses. RELAX, from Synapse's new software division, will be available in late spring, 1984. It will be available on diskette, cassette tape, and cartridge for the Apple, Atari, C-64, VIC-20, and the IBM PC. No price was listed, but look for it to be in the $150 range.

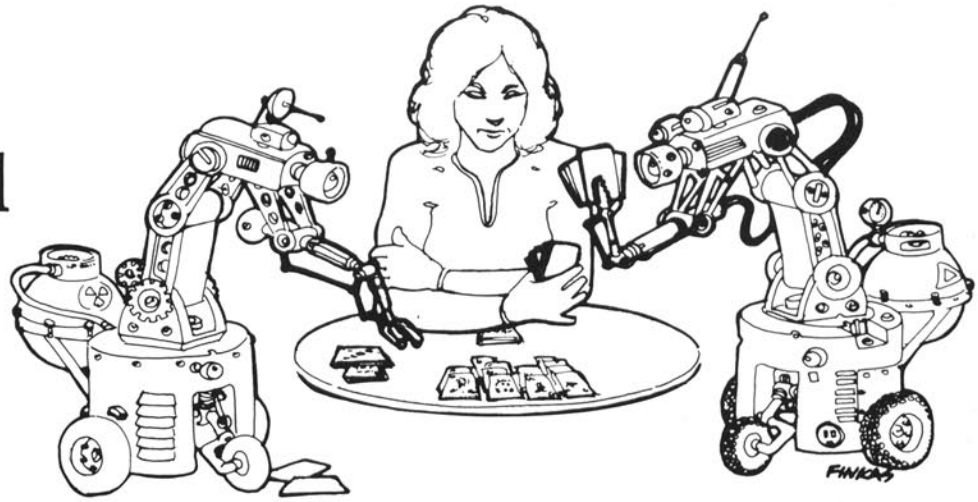
As reported last issue, **Yaquinto** and **Poulos** Publications are working on a joint software venture. The marketing company name will be **FIVE STAR SOFTWARE** (P.O. Box 631, Elk Grove Village, IL 60007). Their first release will be **The Tarot Teacher** which should be out by the time you read this. Apple and Atari releases over the next two months will be **Timeship, Murder at the End of Time**:(Apple), **Decision—North Atlantic,Ultimatum, Ironclads**:(Atari).

Computer Gaming World is proud to announce the addition of a new junior editor, Rebecca Michelle Sipe. Ms. Sipe joined the firm on Jan. 27, 1984, weighing in at 7 pounds 0 ounces (19 inches). Operations Manager Suzanne Sipe, who was instrumental in bringing Rebecca into the organization, is quite pleased with progress so far, but has complained about the late hours the new employee seems to be keeping.



Editor Sipe showing ropes to new junior editor Rebecca.

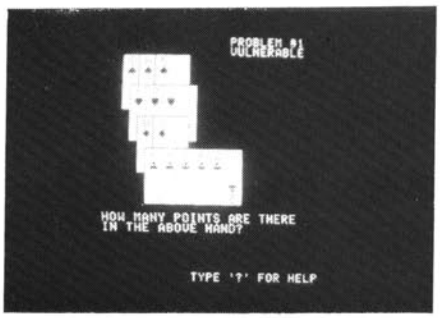
BRIDGE: Goren Computerized



by Bob Proctor

BASIC INFORMATION

NAME:	**Goren's Learning Bridge Made Easy**
TYPE:	**Tutorial**
SYSTEM:	**Apple**
FORMAT:	**Disk**
#PLAYERS:	**1**
PRICE:	**$79.95**
PUBLISHER:	**CBS Software Greenwich, CT**



Here's something different! While not exactly a game itself, it's a program that teaches you how to play a game. It is a good product and unique at this point in time, but do NOT expect computer-based instruction. What you get is a book by Charles Goren and a diskette of practice exercises. Whether this is worth $80 to you will depend on how much you already know about bridge and how much you enjoy drill and practice.

OPENING THE BOX

Inside, you find the diskette, a 2-page User's Manual, and a 130-page Player's Manual. The User's Manual can be ignored if you've ever used a computer before. The Player's Manual is the meat; it contains all of the actual instruction. The first chapter covers the rules of bridge. The next 9 chapters teach you about bidding following Goren's system of counting points for high cards and distribution. The last two chapters cover the play of the hand (after the bidding is over). The style is good but very compact, thanks to Goren's experience in writing about Bridge. You'll go quickly until you reach unfamiliar material and from then on you'll have to read slowly and carefully. You'll even find it necessary to reread some sections.

SO WHAT DOES THE COMPUTER DO?

Basically, you read a chapter from the manual and then practice what you've learned using one of the exercises on the diskette. It's important to master each skill before going on. For example, Exercise 1 lets you count up the point values of hands, a skill required by all subsequent lessons. Later exercises let you practice making opening bids or responding to opening bids made by your partner or opponents.

There are eleven computer-based exercises. The first ten all give you practice with some aspect of the bidding and generate hands randomly. This means you can practice as much as you want. The eleventh exercise brings it all together. It uses 100 pre-determined hands, so once you learn them all, you're done. They demonstrate progressively more complex ideas and mix elements of both bidding and play.

The screen display is clear and functional and is useable with either color or monochrome monitors. The cards are usually shown in the middle of the screen — their ranks and suits marked on the corners. During play, your hand appears at the bottom of the screen and the dummy's hand at the top. You are never left guessing about what you are supposed to do and whenever help is available (with the ? key), this fact is noted. If you ask for help, the screen shows a summary of the rules pertaining to the current situation. This is useful for review.

If you make an incorrect play, the feedback follows one of two patterns. Most often, the computer will simply say, "No, there's a better play", and show you. It never explains why its choice was better, although it's usually obvious IF you've been reading carefully. On a few crucial plays, however, the program will give you a second chance. If you miss a second time, a short sentence appears to tell you why you should make the play indicated. This is very effective, and almost makes you feel as if Goren were looking over your shoulder. Unfortunately, it doesn't happen very often. For $80, it would have been nice to have the 100 practice hands on a separate disk (or the back side) so there could have been more of this kind of feedback. If there were enough of it, you could learn most of the game without having to resort to the book.

CONCLUSIONS

CBS calls the package a "bridge learning system" and this is a fair description. The book and the exercises are tools which you can use in whatever manner works best for you. If you're an absolute novice, you'll probably find the going tough at first. There is nothing to help you learn the rules of the game except ten pages in the book. An exercise on scoring would be a natural, for example, since bridge is second only to Mah Jong when it comes to weird scoring.

If you're a good player, you'll enjoy testing your skill on the practice hands. However, you may be irritated by not being able to play the hands "your way"; you must follow the book. Still, if you're willing to delve into the book for explanations, I'll bet you'll learn something.

The program is best, then, for a person who already knows the rules of bridge but very little else. They can jump right into the lessons on bidding and benefit most from the drill and practice exercises. Just remember that contract bridge is a complex game. It is unreasonable to expect to learn to play it well without a considerable amount of effort and practice. Beware of false expectations, then, there is just no way to make it really "easy".

DISPATCHES

Insights From the Strategy Game Design Front



M.U.L.E. Designer Notes

Dan Bunten
of Ozark Softscape

I am grateful that so many of you have enjoyed **M.U.L.E.** and voted it into the top five on the game ratings list. Several people have even asked that I explain the design of M.U.L.E. My purpose in writing this column has always been to offer information that would help future game designers become better than those of us now struggling. If you are not a potential designer then I hope I can help you be a more discriminating consumer because, in the final analysis, informed buyers are what will push this field to new heights. So, with that purpose in mind and a great deal of humility, I will describe in as much detail as you can stand the decisions that were made in the design of M.U.L.E.

First, let me switch from the singular "I" to the plural "we", since I am part of the group Ozark Softscape. This product was a result of the exciting synergy between myself, my brother Bill Bunten, Jim Rushing and Alan Watson who make up our group. We also received considerable input from Joe Ybarra, our producer at Electronic Arts. Initially we had decided to do a business strategy game for multiple players. This was going to be similar to my previous game, **CARTELS & CUTTHROATS.** The new game was going to have more graphics and better playability than Cartels. An element from a game I had written in 1978 called **WHEELER DEALERS** was going to be the new twist for this product. Wheeler Dealers was a 16K cassette program for the Apple whose main feature was a four player "real-time" auction. Although Wheelers had only sold 150 copies (it included a kludgy hardward device and sold for the outrageous price of $54 in 1978), it had always seemed fun to me because of its auction. So we decided to try something similar.

Since this new game was going to be an interactive multi-player game, we looked around for a model for a successful game of this type. The quintessential model was Monopoly. Our first step, therefore, was to discover some of the elements that made Monopoly such a successful game. Bill said it was the "tokens" (the battleship was always his favorite)! We all laughed, but as you can see in the final version of M.U.L.E., we included something of the flavor of the tokens in the form of "species selection". The main point we came up with that made Monopoly different from most other board games (and from all computer games) was the fact that it isn't "rule-driven". Its rules are just the framework for a social interaction with other players. People playing Monopoly do a number of things outside the game system like swapping property, special deals, loans, etc. In addition, players adopt certain styles towards other players such as the "soft touch" (in our family, Mom would always let you off without paying rent), or the "cutthroat" (who forces you to mortgage property to pay the exact amount). The implications for our design in all of this were that we wanted our game to offer as much flexibility as possible.

Although Monopoly is a real-estate development game, we felt that a theme dealing with pioneering in space was more exciting in this day and age. (In fact, "Planet Pioneers" was the original title for the game.) Thus, acquiring and developing land was to be one of the main elements of the game. In Monopoly, once you own a group of two or three properties you can move to the next phase of development. In M.U.L.E. we decided to have a more economically realistic model that affected your performance. Thus, we included elements of *economies of scale* (adjacent properties doing the same kind of production) and *learning curve* (the more properties doing the same type of work the higher your per unit production). In this way the computer could bring something new to the party. Much greater depth in the game trade-offs is possible without added complexity for the players.

At this point, we had the main concepts laid out. The new game would be a multi-player land development game with a real-time auction. However, concepts alone do not make a game. We needed a scenario that would allow us to "feel" our way through the myriad decisions needed to complete the design. Bill and I had both read a book by Robert Heinlein called *Time Enough for Love.* One of the many stories in that book dealt with the main character's efforts to colonize an undeveloped world. In the story, there was a curious paradox in the fact that a galactic high technology culture would still develop new worlds much like the pioneers of the old west. The civilization would allow settlers to attempt to turn a "marginal world" into a productive planet. If the pioneers succeeded, the world would be accepted into the federation. If they failed then the federation hadn't lost much. The intriguing point for us in this story was that a highly developed civilization would still depend on the personal drive of a few individuals with relatively primitive tools to create new production capacity. This fit with our own philosophy, that a man with a dream is worth more than a dozen corporate planners.

We had part of the backdrop for our design. One of the specifics that came out of the scenario dealt with something quite similar to the "40 acres and a mule" method of pioneering. In *Time Enough for Love* a genetically designed burro/donkey/horse/mule provided the main non-human energy resource. We liked that idea but considered a miniature "Star Wars Walker" more attractive. Alan's son had a foot high model that became the first M.U.L.E. From that point, we simply exaggerated the comic head-bobbing to create a more friendly creature. Since our M.U.L.E. was a robot, we figured he could be programmed to create different products. This gave us one of those wonderful flashes of closure in game design. Instead of having the player specify a certain production type for a particular plot using menus or keyboard entry (as is common in strategy games on the computer), we were able to use our animated creature to provide continuity. You get a M.U.L.E. out of the corral, outfit him in one of the shops to make a certain type product, and then deposit him on your plot of land. This is the same thing as telling the computer you want plot #15 set up for product #2. But it's a whole lot more fun!

Another element of the world we were creating was that it would have to be completely self-supporting. This would add the pressure that would make the game challenging. Another Heinlein book *The Moon Is a Harsh Mistress* provided inspiration for this element. In this book the

Continued on p. 42



SSI

TITLE	LIST PRICE	OUR PRICE	Apple	Atari	Commodore
Battle for Normandy	$40	$27	•	•	•
The Battle of Shiloh	$40	$27	•	•	
Bomb Alley	$60	$40	•		
Broadsides	$40	$27	•	New	
Carrier Force	$60	$40	•	•	
Cartels & Cutthroats	$40	$27	•	•	
Combat Leader	$40	$27		•	•
Computer Ambush (2nd Ed.)	$60	$40	•		
Computer Baseball	$40	$27	•		•
Computer Quarterback	$40	$27	•		
The Cosmic Balance	$40	$27	•	•	
Cosmic Balance II	$40	$27	•	•	
Cytron Masters	$40	$27	•	•	
Eagles	$40	$27	•	•	•
Epidemic!	$35	$23	•	•	
50 Mission Crush	$40	$27		New	New
Fighter Command	$60	$40	•		
Fortress	$35	$23	•	•	New
Galactic Adventures	$60	$40	•		
Galactic Gladiators	$40	$27	•		
Geopolitique 1990	$40	$27	•		
Germany 1985	$60	$40	•		New
Guadalcanal Campaign	$60	$40	•		
Knights of the Desert	$40	$27	•	•	•
Napoleon's Campaigns	$60	$40	•		
North Atlantic 1986	$60	$40	•		
President Elect	$40	$27	•		
Professional Tour Golf	$40	$27	•		•
Pursuit of the Graf Spee	$60	$40	•		
Queen of Hearts	$35	$23	•	•	
Questron	$50	$33	New	New	
Rails West	$40	$27	New	New	
RDF 1985	$35	$23	•		New
Ringside Seat	$40	$27	•		•
Road to Gettysburg	$60	$40	•		
S.E.U.I.S.	$40	$27	•		
The Shattered Alliance	$60	$40	•		
The Shattered Alliance	$40	$27		•	
Southern Command	$60	$40	•		
Tigers in the Snow	$40	$27	•	•	•
War in Russia	$80	$53	New	New	

INFOCOM

TITLE	LIST PRICE	OUR PRICE	Apple	Atari	Commodore
Deadline	$50	$33	•	•	
Enchanter	$50	$33	•	•	•
Infidel	$50	$33	•	•	•
Planetfall	$50	$33	•	•	•
Sorcerer	$50	$33	New	New	New
Starcross	$40	$27	•	•	
Suspended	$50	$33	•	•	
Witness	$50	$33	•	•	•
Zork I, II, III	$40	$27	•	•	

SIMULATIONS CANADA

TITLE	LIST PRICE	OUR PRICE	Apple	Atari	Commodore
Grey Seas, Grey Skies	$60	$40	NEW		
Fall Gelb	$60	$40	NEW		

AVALON HILL

TITLE	LIST PRICE	OUR PRICE	Apple	Atari	Commodore
The Alien	$28	$19	•		
Andromeda Conquest	$23	$15	•	•	
Close Assault	$35	$23	•	•	
Computer Football Strategy	$21	$14		New	New
Dnieper River Line	$30	$20	•	•	
Empire of the Overmind	$35	$23	•	•	
Fortress of the Witch King	$25	$17	•		
Free Trader	$25	$17	•	•	
Galaxy	$25	$17	•	•	
G.F.S. Sorceress	$35	$23	•	•	
Jupiter Mission 1999	$50	$33		New	
Legionnaire	$40	$27	•	•	
Lords of Karma	$25	$17	•	•	
Panzer Jagd	$30	$20		•	New
Paris in Danger	$35	$23		•	
Parthian Kings	$25	$17	•		
Space Station Zulu	$25	$17	•	•	
T.A.C.	$40	$27	•	•	
Tanktics	$29	$19	•	•	
Telengard	$28	$19	•	•	•
Tournament Golf	$30	$20	New		
Under Southern Skies	$25	$17	•		
VC	$25	$17	•	•	
Voyager	$25	$17	•	•	

SIR-TECH

TITLE	LIST PRICE	OUR PRICE	Apple	Atari	Commodore
Crypt of Medea	$35	$25	•		
Galactic Attack	$30	$22	•		
Rescue Raiders	$35	$25	•		
Star Maze	$35	$25	•		
Wizardry-Proving Grounds	$50	$36	•		
Wizardry-Knights of Diamonds	$35	$25	•		
Wizardry-Legacy of Llylgamyn	$40	$30	•		

MICROPROSE

TITLE	LIST PRICE	OUR PRICE	Apple	Atari	Commodore
Hellcat Ace	$30	$22		•	•
Mig Alley Ace	$35	$25		•	
Nato Commander	$35	$25		•	•
Solo Flight	$35	$25		•	•
Spitfire Ace	$30	$22		•	•
Wingman	$35	$25		•	

BRØDERBUND

TITLE	LIST PRICE	OUR PRICE	Apple	Atari	Commodore
Choplifter	$35	$23	•	•	
Operation Whirlwind	$40	$27		•	New

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STARCROSS

As told by Scorpia

Ah, glad to see you drop in again! This time, we're off on a hi-tech adventure, far away from deep and dank dungeons. So, fasten your seatbelt, and we'll liftoff to *Starcross*!

First, you're going to be needing the map that came with the game. The location of the alien ship changes from game to game, and without the map, you won't be able to figure out what the proper coordinates are for getting to it. So, make sure you don't lose that map!

There isn't too much to do while you're on your way through space to the mystery ship, so you might just as well enjoy the descriptions as you fly along. Eventually, you will be captured by the ship, and that's where the game really begins. Leaving your own vessel, you will find yourself just outside the Red Airlock. Getting it open is the first puzzle of the game.

The solution to it is really simple. Careful examination of the sculpture, along with a little thought about your origins, should get the airlock open pretty quickly. This will also provide you with the first of the twelve rods you will be collecting throughout the game.

Once past the airlock, you will find yourself in a truly alien world. Much will be incomprehensible at the start (and perhaps for much of the game, if not all of it!), so the best thing to do at this point is just save the game, then wander around for awhile, mapping as you go. Once you have a fair idea of the layout of the ship, and where you can find certain objects, you're ready to play the game in earnest.

Now, as you went around the ship, you probably found yourself running across various strange creatures (and even one familiar one .... don't go walking around in the dark!!). All of them, in one way or another, will be useful to you; the trick, as always, is finding the right way of dealing with them.

For example, there are the rat-ants. Not terribly intelligent, but they *do* know how to protect their nest ... and the red rod that's stuck in it. The answer to this problem is one that you wouldn't ordinarily associate with an Infocom game, and is the least satisfying of all the solutions in the game. But you do need that red rod for something, so it's best to get it now.

Once you have that, you might also want to pay a visit to the spider who lives behind the blue airlock. Unlike the rat-ants, he is quite intelligent, and even friendly. He has something for you, IF you have something for him. Remember that he's bored; what might you have with you that could keep him happily occupied for awhile?

Well, by now you have several rods, and you're probably wondering what, if anything, to do with them. Don't worry, they all have a purpose. What you need to do now is pay a visit to the Grasslands. Explore around there, and you should find a hatch without too much trouble. Once you open it and go inside, you'll probably get an idea or two about the uses of the rods. A little knowledge of chemistry is helpful here, but not absolutely necessary. Trial and error works pretty well, too. Remember to take with you anything you might find here.

Ok, now you need to make your way to the Yellow Airlock; beyond it will be another rod. You may find that the door is a bit harder to open than the others were, but don't let that stop you! There is also a basket inside the door; make sure you pick that up, because it will come in very handy!

Then it's off to the lab in the Blue Hall, where you will find a mysterious silver sphere, and some strange controls. A little messing around shows you that you can make the sphere larger or smaller by twisting a dial; when you do that, a blue rod is revealed inside the sphere! Alas, you can't just pull it out.

Looking around, you see a red disk and a green disk. Pick them up, because they are needed here, and in some other circumstances as well. It will take a little experimenting on your part to figure out what the disks do, and quite a bit more to see how they should be used in this situation. I'll just tell you that neither disk should be put on the sphere, and that you shouldn't forget what you found in the Yellow Airlock.

After getting the blue rod (and making sure you have the disks with you!), head along to the Computer Room. Investigation of the computer should reveal to you what needs to be done pretty easily, and now you have a gold rod to add to your collection. Don't worry about all the fancy displays here; once you have the gold rod, you've done everything necessary in this room.

While you've been moving around, you may have noticed a little mechanical "mouse" that collects trash. This machine is quite important; it will help you to obtain another rod. It isn't necessary to follow it around, however; just be a litterbug. When the item you dropped has disappeared, you'll know the mouse has been by. Of course, you *do* have to drop the right item (does that have you going in circles?).

Right about now, it's time to pay your respects to the Weasels. Make your way to their village, and wait until the chief appears. He will be anxious to trade with you; feel free to give him what he wants ... just make sure that *you* get what *you* need, so be assertive!

When you have that, hang around. There is something else the chief can do for you, so don't let him out of your sight. Eventually, you will see why that is necessary, when you reach the Green Airlock. This is a tricky spot, in more ways than one. Make sure you check out everything in the area; you should be leaving with a couple of extra items. Speaking of leaving, you can't just walk out the way you came in; try doing that, and you'll find yourself in a whole lot of trouble! There is, of course, another way out....

Once you've figured out what that is, you'll want to go to the Observatory. Here, you'll need to look around very carefully indeed; pay close attention to the room description and your inventory. Don't leave empty-handed.

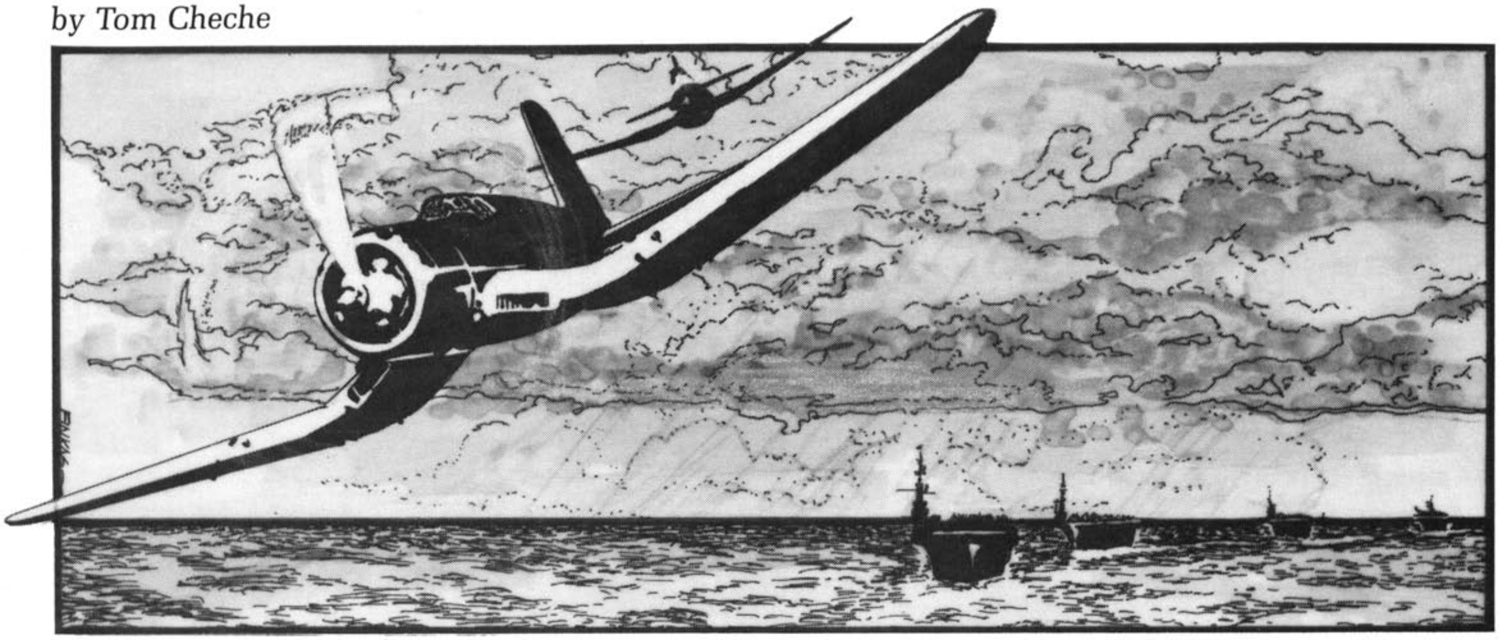
Which reminds me, somewhere along the way, you should be sure to pick up the raygun from the Weapons Deck. It will come in very handy, in more ways than one. Now it's time to look at those mysterious bubbles in the Grasslands.

Getting to the first one should present

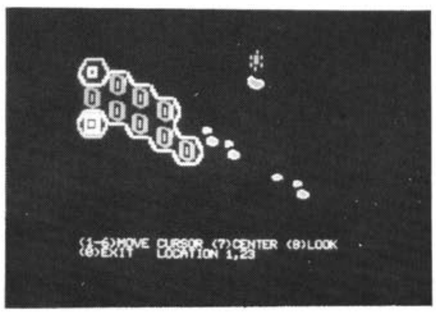
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CARRIER FORCE: THE FOG OF WAR AT ITS FOGGIEST

by Tom Cheche



NAME:	**Carrier Force**
TYPE:	**Wargame**
SYSTEM:	**Apple, Atari**
#PLAYERS:	**1 or 2**
AUTHOR:	**Gary Grigsby**
PRICE:	**$59.95**
PUBLISHER:	**Strategic Simulations Mountain View, CA**



The emergence of the computer wargame has provided the serious wargamer with three distinct advantages over board games. The computer can attend to the minute bookkeeping details that slow down the play of a board wargame. The computer can provide an opponent of varying levels of competance. And the computer can create and maintain that most difficult element to simulate .. the "fog of war."

Military Commanders have always been forced to make decisions based on information that was, to one degree or another, incomplete or inaccurate. The problem in board wargaming has always been finding a realistic method of parcelling out that information in such a way that the opponents experienced a "fog of war" as close as possible to the actual situation. The computer wargame dispenses that information in the most realistic and playable method available.

Prior to the emergence of the computer wargame, it was this lack of a true "fog of war" that detracted from the playing of board simulations that dealt with aircraft carrier warfare during WWII. One of the most fascinating chapters in military history, the carrrier battles of 1942 lost much of their tension when bogged down by the often tedious procedure of airborne search. Search procedures had to be conducted one air group at a time, one hex at a time with the success or failure of the search in each hex being determined by the weather conditions and other factors. It was, at best, a chore.

But, in the quest for a detailed board simulation, the methodical search procedure had to occur. Hard-core gamers accepted the monotonous searches as part of the price they paid for realism, all the while revealing to their opponent where they were conducting searches by calling out the hex coordinates; a most unrealistic situation.

In all of the board game treatments of aircraft carrier operations, from **MIDWAY,** to **FAST CARRIERS, INDIAN OCEAN ADVENTURE, AND FLATTOP** the impression left was that while the feel was close, it missed the mark. There was always a sense, after playing, of not quite experiencing the true tensions, the true sensations, the taste of what it was really like in carriers during the uncertain days of 1942.

With the release of **CARRIER FORCE** (CF) by Gary Grigsby, Strategic Simulations, Inc., takes a giant step towards closing the gap between reality and simulation. Author Gary Grigsby has described CF as being "about as foggy as a game can get," and that is a fair assessment. With only a few exceptions, players know only what their search has revealed, and even then the search information is not always to be believed.

CF is an operational level treatment of the four great carrier battles of 1942 in the Pacific. Coral Sea, Eastern Solomons, and Santa Cruz are contested on a scrolling, high resolution map of the South Pacific area including the Solomon Islands, and portions of New Guinea and northeastern Australia. The map for the Midway scenario is separate and relatively featureless, representing only the Midway atoll.

Like all SSI products, CF can be played between human opponents or the computer can provide a very competent opponent as commander of the Japanese forces. There are multiple levels of difficulty, and there are provisions for historic and random starting locations. During each turn (one hour game time) players must maneuver task forces, launch land based and carrier based searches, form attack and patrol missions, ready aircraft, launch and recover aircraft, move air groups and conduct air searches, and resolve combat.

In all of the scenarios the initial turns will find the players creating air groups in order to get search planes up as soon as possible. Land bases can fly off long-legged search craft that can remain aloft

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5221 Central Avenue, Richmond, CA 94804 • 415/527-7751

Directory of Game Manufacturers

Our First Annual Computer Game Manufacturer's Directory will be helpful in keeping up with the changing marketplace. Computer game manufacturers are hard to keep up with. Although there are new names in the field. 1983 was a year that saw more "players" drop out of the game than join the game. Additionally many companies moved during the year. This list is current as of April 1, 1984, although we are are sure that there are companies missing that should be here.

Game titles are listed for each company. Where the company puts out more than 10 games, generally the 10 highest sellers are listed. The machines that the companies support with entertainment software are also listed.

A

Aardvark
2352 S. Commerce
Walled Lake MI 48088
Phone: 313-669-3110

C-64, VIC-20, Coco, Timex,

Labyrinth, Trek Adventure, Derelict, Dungeons of Death, Pyramid, Mars Quest

Academy Software
PO Box 6277
San Rafael CA 94903
Phone: 415-499-0850

C-64, VIC-20

IFS (Flight Simulator), Typing, Tutor & Word Invaders

Actioncraft
5753G E Santa Ana Cyn Rd.
Anaheim Hills CA 92807
Phone: 714-998-7117

Apple

Pick-a-dilly Pair, Speedway Classic

Activision
2350 Bay Shore Frontage Rd.
Mountain View CA 94043
Phone: 415-960-0410

Atari

River Raid, Kaboom!, Mega Mania, Pitfall

Adventure International
Box 3435
Longwood FL 32750
Phone: 800-327-7172
Support: 305-862-6917

Apple, Atari, TRS-80, PC, C-64 Coco

Sea Dragon, Preppie, Adventure Series (13 Titles), Stone of Sisyphus, Labyrinth of Crete, War, commbat, The Curse of Crowley Manor, Saigon:The Final Days, Eliminator and others

Anthro-digital, Inc.
103 Bartlett Ave.
Pittsfield MA 01201
Phone: 413-448-8278

PC

Gambling Games I

Anything Software Co.
P.O. Box 60219
Palo Alto CA 94306

Apple

Plain Vanilla Games

Apropos Technology
350 N. Lantana Ave., Suite 821
Camarillo CA 93010
Phone: 805-482-3604

VIC-20, C-64

Dr. Floyd, Wordplay, Type For Your Life

Ark Royal Games
P.O. Box 14806
Jacksonville FL 32238
Phone: 904-777-1543

Coco, C-64

Across The Rubicon, Guadalcanal, Bomber Command

Artsci, Inc.
5547 Satsuma Ave
North Hollywood CA 91601
Phone: 213-985-5763

Apple

Draw Poker, Roulette, Craps, Apple 21, Gomoku, Photar, Starmines, Reversi, Best of Bishop, Microgammon II, Baker's Trilogy, Cross Words, Poker Solitaire, Cypher Bowl

Artworx Software Co., Inc.
150 North Main St.
Fairport NY 14450
Phone: 716-425-2833

Atari, Apple, C-64

Alley-oops!, Gwendolyn, Vault of Zurich, Bridge 4.0, Compubridge, Strip Poker, Monkeymath, Monkeynews, Monkey-Builder And More

Atari, Inc.
PO Box 50047
San Jose CA 95150
Phone: 408-745-2000

Atari

Eastern Front (1941), Ms. Pac, Pole Position, Jungle Hunt, Dig Dug, Joust, Robotron, Pengo, Moon Patrol, Donkey Kong Junior

Atari Program Exchange
1346 Bordeaux
Sunnyvale CA 94086
Phone: 408-727-5603

Atari

TypoAttack, Excalibur, Getaway, Kangaroo, Quarxon, Salmon Run, Galahad and the Holy Grail, Dandy, Bellum, Raid on Gravitron, and others

Atarisoft
1399 Moffett Park Dr.
Sunnyvale CA 94086
Phone: 408-743-4132

Apple, Atari, PC, C-64, VIC-20 TI

Pac-man, Centipede, Defender, Stargate, Dig-dug, Donkey Kong, Robot-Ron:2084, Picnic Paranoia, Protector, Shamus, Galaxian, Superstorm

Avalon Hill Game Company
4517 Harford Rd.
Baltimore MD 21214
Phone: 301-254-5300

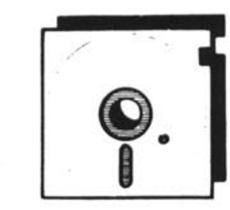
Apple, Atari, C-64, PC, Timex, TRS-80, VIC-20

Over 50 Titles including Under Southern Skies, Tournament Golf, Panzer-Jagd, Dreadmoughts, Tac, Paris in Danger, Computer Diplomacy, Legionnaire, Tanktics, Dnieper River Line, Telengard, Parthian Kings and others

Avant-garde Creations
P.O. Box 30160
Eugene OR 97403
Phone: 503-345-3043

Apple, PC, VIC-20, C-64, Atari, TI

Hi-res Computer Golf 2, Pro-Courses 2, Trompers, Lazer Maze, Jump Jet, Word Scrambler & Spelling Tutor



B

Bez
PO Box 19654 Suite 236
Irvine CA 92714
Phone: 714-752-3888

Apple

Bez-mx, Bez-off, Double Trouble

Big Five Software
PO Box 9078-185
Van Nuys CA 91409
Phone: 213-782-6861

Atari

Miner 2049er

Blue Chip Software
19818 Ventura Blvd. #204
Woodland Hills CA 91364

Many

Millionaire, Tycoon, Baron, Squire

Blythe Valley Software
Box I Hwy 41 Silver Crk Cntr
Oakhurst CA 93644
Phone: 209-683-4735

Apple, Atari, PC

The Story Book Series (Hansel & Gretel, Briar Rose, The Storyteller), The Milky Way Merchant, Spel'bound'

Bram, Inc.
18779 Kenlake Place, N.E.
Seattle WA 98155
Phone: 206-486-8428

Atari, C-64

Zombies

Briley Software
PO Box 2913
Livermore CA 94550-0291
Phone: 415-455-9139

C-64, VIC-20, TI

Blackjack Tutor, Fur Trapper, High Seas, Mansion!, Museum!, Pentagon!

Broderbund Software
17 Paul Dr.
San Rafael CA 94903
Phone: 415-479-1170

Apple, Atari, C-64, Vic, PC

A.E., Arcade Machine, Choplifter!, David's Midnight Magic, Drol, Lode Runner, Matchboxes, Operation Whirlwind, Seafox, Serpentine, and others

Budgeco
428 Pala Ave.
Piedmont CA 94611

Apple

Pinball Construction Set

C

California Pacific
757 Russell Blvd.
Davis CA 95616
Phone: 916-756-2921

Apple, C-64

Lady Tut, Lord British Starter Kit (Ultima & Akalabeth), Hungry Boy, Bill Budge's 3-d Graphics System & Game Tool, Cosmos Mission, Bill Budge's Genesis (Trilogy & Space Album)

CBS Software
One Fawcett Place
Greenwich CT 06836
Phone: 203-622-2525

Apple, Atari, C-64, PC, Jr

Goren: Learning Bridge, Murder By The Dozen

CE Software
801 73rd Street
Des Moines IA 50312
Phone: 515-224-1995

Apple

Swordthrust Series (7 Games), Wall Street, Mission Escape!

Continued on p. 28

"Make note of that name, Electronic Arts. It may well set the standard for sophisticated entertainment software in the '80's."

—Creative Computing.

ELECTRONIC ARTS COMES TO THE COMMODORE.



C64, Ap, At

HARD HAT MACK™

by Michael Abbot and Matthew Alexander

"An outstanding, state-of-the-art game. Hard Hat Mack is the blue collar hero of this three screen climbing game and his tasks are far from simple."

—Arcade Express

"If you put Hard Hat Mack in the ring with all other games on the market, it would win most bouts in the opening seconds of the first round. It's that good."

—Softalk



ARCHON™ *by Free Fall Associates*

"No review could possibly do more than hint at the manifold excellence of Archon. It is truly a landmark in the development of computerized strategy games." —Video

"...you're bound to fall for it. Imagine a chess game in which you can cast spells."

—Creative Computing

"...the offices of A.N.A.L.O.G. echo with the searing roar of dragon-fire and shouted obscenities from angry players. Archon turns friend against friend and inspires grudges that can last for days. What better compliment can you give to a computer program."

—A.N.A.L.O.G.

MOST INNOVATIVE GAME OF THE YEAR – Electronic Games

COMPUTER GAME OF THE YEAR – Creative Computing

TOP 10 GAMES OF THE YEAR – OMNI



C64, Ap, At

Ap, C64, At, signify availability for Apple II, II+, IIE, Commodore 64, or Atari home computers with disc drive. All screen shots represent Commodore 64. Apple is a registered trademark of Apple Computer, Inc. Commodore 64 is a registered trademark of Commodore Business Machines, Inc. Atari is a registered trademark of Atari, Inc., a Warner Communications Company.

MURDER ON THE ZINDERNEUF™
by Free Fall Associates
"Whodunit fans, drop your Agatha Christie and come running. This is your game! The graphics are among the most colorful and attractive I have seen in any game." —Antic



C64, At

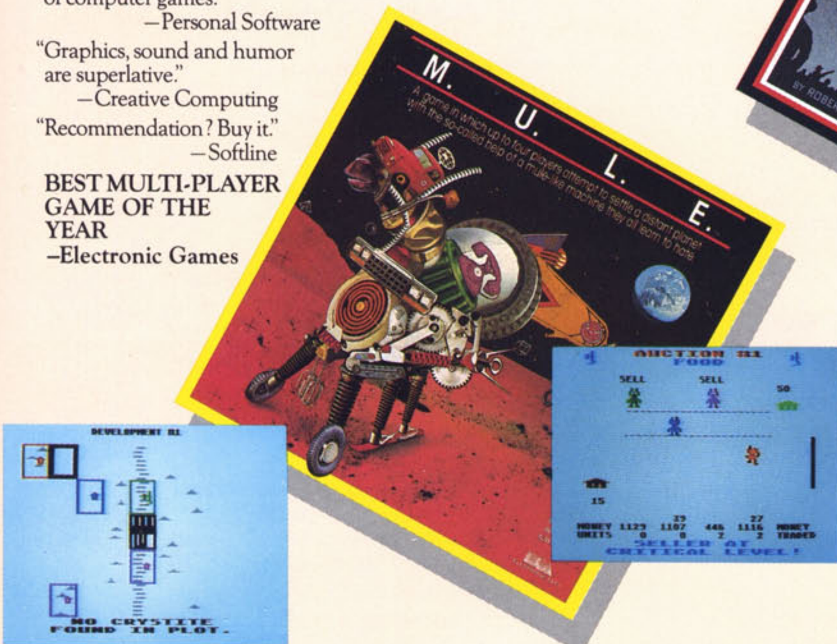
M.U.L.E.™ 
by Ozark Softscape
"A must-have."
—Electronic Fun

"May well become the Monopoly of computer games."
—Personal Software

"Graphics, sound and humor are superlative."
—Creative Computing

"Recommendation? Buy it."
—Softline

BEST MULTI-PLAYER GAME OF THE YEAR
–Electronic Games



C64, At





PINBALL CONSTRUCTION SET™
by Bill Budge
"The best program ever written for an 8-bit machine."
—Steve Wozniak

"A fully integrated graphics-oriented design tool that lets you create your own video pinball games, required study for all serious software authors."
—A.N.A.L.O.G.

"A tour de force."
—Creative Computing

MOST ORIGINAL GAME OF THE YEAR
– Creative Computing

TOP 10 GAMES OF THE YEAR
– Omni



C64, Ap, At



ELECTRONIC ARTS
Home Software for the Commodore 64

Look for our other Commodore 64 titles like AXIS ASSASSIN,™ WORMS?,™ and THE TESSERACT STRATEGY™ at your favorite computer store, software center and at fine department stores throughout the country. For more information about these and other Electronic Arts products, write or call us at 2755 Campus Drive, San Mateo, CA 94403 – (415) 571-7171.
For a free catalog, send a stamped, self addressed #10 envelope.

Cheapsuit Software
Box 923
Iowa City IA 52244
Apple
Star Feery

Coleco Industries, Inc.
999 Quaker Ln, South
West Hartford CT 06110
Phone: 203-725-6000
Adam
Broad Range of Titles For Adam

Com*data Computer House
320 Summit Ave.
Milford MI 48042
Phone: 313-685-0113
VIC-20, C-64
Supercuda, Ape Craze, Escape Mcp, Firing Line, Maelstrom, Pegasus Odyssey, Circus, Perseus & Andromeda, and others

Counterpoint Software
4005 West Sixty-fifth St.
Minneapolis MN 55435
Phone: 612-726-7888
Phone: 800-328-1223
Apple
Quizagon

Creative Software
230 East Caribbean Drive
Sunnyvale CA 94086
Phone: 408-745-1655
C-64, PC, Jr, Apple
Crisis Mountain, Save New York, Moon Dust, Dragon Hawk, Choplifter, In the Chips, Bumble Bee, Pipes

Cross Educational Software
PO Box 1536, 1802 N. Trenton
Ruston LA 71270
Phone: 318-255-8921
Apple
Aquarium, Dinosaurs, Spell-a-Vision, Blitzkrieg II

Cyber Enterprises
17517 Fabrica Wy –K
Cerritos CA 90701
Phone: 714-523-8382
Apple, C-64, PC, Jr, TRS-80
Cyberchess Chess Improvement System

D

Data Equipment Supply Corp.
8315 Firestone Blvd
Downey CA 90241
Phone: 213-923-9361
VIC-20, C-64
Zarcon, Silly 64, Star Defender, Lazer Command, Space Trader

Data Trek
121 West E St.
Encinitas CA 92024
Phone: 619-436-5055
Apple
Maze Craze Construction Set, Willy Byte

Dataknight
Normandy Circle
Glenmoore PA 19343
Phone: 215-431-8900
Apple, PC, Jr
Grand Slam Trivia (plus Additional Trivia Disks)

Datamost
20660 Nordhoff
Chatsworth CA 91311
Phone: 818-709-1202
Apple, Atari, C-64
Over 40 Titles Including: Aztec, Bilestoad, Snack Attack, Mr. Robot

Datasoft
19808 Nordhoff Place
Chatsworth CA 91311
Phone: 818-701-5161
C-64, Atari, Apple, PC, Jr, TRS-80
Sands of Egypt, Moon Shuttle, O'Riley's Mine, Pooyan, Bruce Lee, Genes Is, The Dallas Quest, Zaxxon, Lost Tomb, and others

Dataworks
P.O. Box 236
Deep River CT 06417
Phone: 203-526-9257
Apple
Tank Platoon!

Davka Corporation
845 North Michigan Ave., –843
Chicago IL 60611
Phone: 800-621-8227
In IL 312-944-4070
Apple, PC, C-64, Atari, TRS-80
Bible Baseball, Create-a-quiz, Crumb Eater, Crumb Sweeper, Fuzzball, I.Q. Baseball, The Lion's Share, The Philistine Ploy, Samson And Delilah

Designware
185 Berry St.
San Francisco CA 94107
Phone: 415-546-1866
Toll Free: 800-572-7767
Apple, Atari, PC, C-64, Jr
Crypto Cube, Spellicopter, Math Maze, Creature Creator, Spellakassm, Spellagraph, Trap-a-zoid

Digital Marketing Corp.
2363 Boulevard Circle
Walnut Creek CA 94595
Phone: 415-947-1000
Support & Sales 800-826-2222
PC, CP/M
Orbquest, Astrododge

Dilithium Software
8285 SW Nimbus Suite 151
Beaverton OR 97005
Main Phone: 503-547-2713
Other Phones: 800-547-2713 (Support)
Many
Golden Flukes and Great Escapes: How to Write Your Own Adventure Games

Discovery Games
936 W. Hwy.36
St. Paul MN 55113
Phone: 612-488-6843
Apple, TRS-80
Chennault's Flying Tigers, Lafayette Escadrille, and other games

Dolphin Microware
410 Stanford Ave.
Palo Alto CA 94306
Phone: 415-321-6333
Atari
Hexmaster

Don't Ask Computer Software
2265 Westwood Blvd., –B-150
Los Angeles CA 90064
Phone: 213-497-4514
Phone: 213-397-8811
Apple, Atari
Abuse

Dynacomp, Inc.
1427 Monroe Ave.
Rochester NY 14618
Phone: 716-442-8960
Support: 716-442-8731
16 Systems
Over 90 Game Titles

E

Earthware Computer Service
P.O. Box 30039
Eugene OR 97403
Phone: 503-344-3383
Apple
Volcanoes, Star Search, Zoo Master, Black Belt

Electronic Arts
2755 Campus Dr.
San Mateo CA 94403
Phone: 415-571-7171
Apple, Atari, C-64
Archon, M.U.L.E., Murder On The Zinderneuf, Pinball Construction Set, Hard Hat Mack, One On One, Axis Assassin, Worms?, D-bug, Standing Stones, and others

Electronic Courseware Systems
309 Windsor Road
Champaign IL 61820
Phone: 217-359-7099
C-64, Apple
Ear Challenger

Epyx
1034 Kiel Ct.
Sunnyvale CA 94086
Phone: 408-745-0700

Apple, Atari, PC, Jr, C-64, VIC-20, Adam

A Temple of Apshai, Dragonriders of Pern, Oil Barons, Gateway to Apshai, Silicon Warrior, Mission Impossible, World's Greatest Baseball Game, Sword of Fargoal, Crush Crumble & Chomp, Upper Reaches of Apshai, and others

Eti Software
Box 686
Dover MA 02030

Apple

Program X: The Ultimate Puzzle

F

First Flight Data Systems
Box 555
Kitty Hawk NC 27949
Phone: 919-441-6480

Apple

Bull Run

First Star Software, Inc.
22 East 41st. Street
New York NY 10017
Phone: 212-532-4666

Apple, Atari, VIC-20, TRS-80

Astro Chase, Bristles, Panic Button, Rent Wars, Flip Flop, and others

Flexible Software
P.O. Box 5841
Charlottesville VA 22905
Phone: 804-979-0973

Apple, PC, C-64

Portfolio

FTL
7907 Ostrow St
San Diego CA 92111
Phone: 619-279-5711

Apple

Sundog

G

Gamestar, Inc.
1302 State St.
Santa Barbara CA 93101
Phone: 805-963-3487
Phone: 805-963-6820

Atari, C-64

Baja Buggies, Starbowl Football, Star League Baseball, On Field Football

Gamma Software
PO Box 25625
Los Angeles CA 90025
Phone: 213-473-7441

Atari

Hockey, Soccer

H

H.A.L. Labs
4074 Midland Rd., Suite 23
Riverside CA 92505
Phone: 714-359-8480

Apple, C-64

Super Taxman II, Sheila, Stellar Triumph, Vindicator

Hayden Software
600 Suffolk St.
Lowell MA 01853
Phone: 800-434-1218
In MA: 617-937-0200

Apple, Atari, C-64, PC

Bellhop, Crystal Caverns, Final Conflict, Go, Golf, King Cribbage, Microscopic Journey, Reversal, Sargon III, and others

Highlands Computer Services
14422 Southeast 132nd
Renton WA 98056
Phone: 206-228-6691

Apple

Oldorf's Revenge, Tarturian, Creature Venture, Mummy's Curse, Cosmic Combat

Homecomputer Software
1307 S. Mary Ave., Suite 209
Sunnyvale CA 94087
Phone: 408-735-8400

Apple, C-64, Atari, Jr

Kids Say The Darndest Things ... To Computers, Pro Golf, Plaqueman, Tangrams, Stories Alive! (series)

Homeware
Box 3062
Ruston LA 71272

Apple

Appledowns, Mystic Oracle

Howard W. Sams
4300 W. 62nd St.
Indianapolis IN 46268
Phone: 800-298-SAMS
Support: 800-348-8558

Apple, PC, VIC-20

Ape Escape, Czorian Siege, Reyatta, Spud/mug Shot, Voyage of the Valkyrie, Caves of Olympus, Bermuda Race, Music Games

Human Engineering Software
71 Park Lane
Brisbane CA 94005
Phone: 415-465-4111

PC, C-64, VIC-20, Atari

Attack of the Mutant Camels, Gridrunner, Pharoah's Curse, Shamus, Lazer Zone, Maze Master

Hy-Tek
6502 Micro Drive
Dayton MD 21036
Phone: 301-854-0058

Apple

Profit Motive



CHIP & FERB

by Mark Eliot



I

Ibidinc
179 Allyn St. Suite 607
Hartford CT 06103
Phone: 203-547-0085
Apple, PC, C-64, Atari
The Alpine Encounter

Imagic
981 University Ave.
Los Gatos CA 95030
Phone: 408-399-2200
Atari, Jr, TI
Demon Attack, Microsurgeon, Baseball, Football, Wing War, Quick Step Laser Gates, Moonsweeper, Fathom

Independent Software
1342 Second St.
New York NY 10021
Phone: 212-772-2960
Apple
Key to the Storm, Socket Wilderness, Ringside

Infocom Inc.
55 Wheeler St.
Cambridge MA 02136
Phone: 617-492-1031
Many
Zork Series (I, II, III), Starcross, Suspended, Deadline, The Witness, Enchanter, Planetfall, Infidel

Insoft, Inc.
7833 Southwest Cirrus Drive
Beaverton OR 97005
Phone: 503-641-5223
Apple, PC
Zargs, Grapple, Spider Raid

Island Graphics
PO Box V
Bethel Island CA 94511
Phone: 415-684-2664
Atari
Tax Dodge

J

Jay Gee Programming Co.
7185 Blue Hill Dr.
San Jose CA 95129
Phone: 800-227-1617 X 217
In CA: 800-772-3545 X 217
Atari
Devil's Dare, Attack of The Spelling Bees

Jor-And
Box 9180
Glendale CA 91206
Phone: 818-247-6658
Apple
Secret Agent-Mission One

K

Kelcom Management
30 Southampton Drive Sw
Calgary Alb Canada
Phone: 403-253-5397
Apple
The Exchange

Koala Technologies
3100 Patrick Henry Dr.
Santa Clara CA 95050
Phone: 800-227-6703
In Ca: 800-632-7979
Apple, Atari, C-64, PC
Spider Eater, Dancing Bear

Krell Software
1320 Stony Brook Road
Stony Brook NY 11790
Phone: 516-751-5139
Orders: 800-842-8679 (outside NY)
Apple, Atari, C-64, PC, TRS-80
Adventures In Flesh, The Black Death, Botticelli, Plato's Cave, and others

L

The Learning Company
545 Middlefield Rd. –170
Menlo Park CA 94025
Apple
Bumble Games, Gertrude's Puzzles, Rocky's Boots, And Others

Learning Well
200 South Service Rd.
Roslyn Heights NY 11577
Phone: 516-621-1540
Support: 800-645-6564
(outside NY)
Apple
Space Math, That's My Story, and others

Legionnaire Games Inc.
1415 Dillingham Blvd.
Honolulu HI 96817
Phone: 808-845-2527
Apple
Ringside

Lor Inc.
Rt. 2 Box 185
Rigby ID 83442
Phone: 208-745-8977
C-64
Ophir, Terrain, Strafe

M

Mach-ina Strategy Games
161 Aragon Ave., Suite 202
Coral Gables FL 33134
Phone: 305-443-0027
Atari
Chancellor of the Exchequer

Magnetic Harvest
Box 255
Hopkins SC 29061
Phone: 803-783-3151
Apple
Planetmaster, Gnosis Vii

Micro Lab
2310 Skokie Valley Rd.
Highland Park IL 60035
Phone: 312-433-7550
Apple, Atari, C-64, PC, Jr. Adam
Miner 2049er, Dino Eggs, Death in the Caribbean, The Heist, Scraper Caper, Globe Grabber, Crisis Mountain

Micro Magic
908 Memorial Parkway Nw
Huntsville AL 35801
Phone: 205-536-1290
Apple
Boa

Micro Program Designs
5440 Crestline Rd.
Wilmington DE 19808
Phone: 302-738-3798
Apple
Edu-cave

Micromate Software
Box 20245
Tallahassee FL 32316
Atari
Gridiron Glory, Ramblin Gamblin, Asteroid Artist

Micromax Systems Inc.
6868 Nancy Ridge Dr.
San Diego CA 92121
Phone: 619-457-3131
Support: 619-457-0311
Apple
Cubit

Microprose Software
10616 Beaver Dam Road
Hunt Valley MD 21030
Phone: 301-667-1151
Atari, C-64
Floyd of the Jungle, Hellcat Ace, Spitfire Ace, Mig Alley Ace, Nato Commander, Solo Flight, Wingman

Microsoft Corporation
10700 Northrup Way
Bellevue WA 98004
Phone: 206-828-8080

Apple, PC

Olympic Decathlon, Adventure, Flight Simulator

Mind Games
420 S. Beverly Dr., Suite 207
Beverly Hills CA 90212
Phone: 213-277-8044

Apple

The Desecration

Mind Systems Corp.
P.O. Box 506
Northampton MA 01061
Phone: 413-586-6463

Apple

Airsim-1, Spitfire Simulator, Airsim-3

Mmg Micro Software
PO Box 131
Marlboro NJ 07746
Phone: 201-431-3472

Atari, C-64

Final Flight, Phoenix Lair, Pyramid Run, Rat Race, Timber!, Chomper, Mmg Music Box, Trivia Trek

Moxie
2049 Century Park E. Ste 5264c
Los Angeles CA 90067

Apple

The Great Escape Utility (for use with Castle Wolfenstein)

Muse Software
347 North Charles St.
Baltimore MD 21201
Phone: 301-659-7212

Apple, Atari, C-64

Titan Empire, Advanced Blackjack, Robotwar, Intellectual Decathlon, Caverns of Freitag, Castle Wolfenstein, International Grand Prix, Rescue Squad, The Best of Muse, Abm

Mystic Software
PO Box 536
Lakeside CA 92040-0536
Phone: 619-443-9776

VIC-20, C-64

Sorcerer's of the Amazon, Catacombs of the Pharaohs, Eerie Mansion, Death Probe of the Srulizons, Crystals of Killimanjaro, Monopoly 64

N

Navic Software
P.O. Box 147270
North Palm Beach FL 33408
Phone: 305-627-4132

PC, Apple, C-64

Jury Trial II

Nexa Corp.
PO Box 26468
San Francisco CA 94126
Phone: 415-387-5800

Apple, Atari, Msx

Delta Squadron, Cybernation, Captain Cosmo

O

Odesta
3186 Doolittle Drive
Northbrook IL 60062
Phone: 312-498-5615
Sales: 800-323-5423

Apple, Atari, PC, C-64

Chess 7.0, Checkers 2.1, Odin, Backgammon 5.0, How About A Nice Game of Chess!

Omega Microware
222 S. Riverside Plaza, -2234
Chicago IL 60606
Phone: 312-648-4844

Apple

Nightfalls

Origin Systems, Inc.
1545 Osgood -7
North Andover MA 01845
Phone: 617-681-0609

Apple, Atari, C-64, PC

Exodus: Ultima III, Caverns of Callisto, Car Wars

Orion Software
P.O. Box 2488
Auburn AL 36831
Phone: 205-821-5113
Support: 800-821-8088

PC, Jr, C-64, Apple

Pits & Stones, Paratrooper, PC Man, J-bird

P

Palisades Software
2230 Palisades Dr.
Appleton WI 54915
Phone: 414-739-2636

Apple

Video Vegas

Parker Brothers
50 Dunham Road
Beverly MA 01915
Phone: 617-927-7600

Atari, C-64, VIC-20, TI

Qbert, Popeye, Frogger, Super Cobra, Tutankham

Penguin Software
P.O. Box 311
Geneva IL 60134
Phone: 312-232-1984

Apple, Atari, C-64, PC, Jr

The Coveted Mirror, The Quest, Transylvania, Minit Man, Bouncing Kamungas, The Spy Strikes Back, Spy's Demise, Ring Quest, Pensate, Pie Man, and others

Phoenix Software
64 Lake Zurich Dr.
Lake Zurich IL 60047

Apple

Sherwood Forest, Mad Rat, Gemini, Masquerade, Queen of Phobos, Bats In Belfry, Adventure In Time, Birth of the Phoenix

Piccadilly Software, Inc.
89 Summit Ave.
Summit NJ 07901
Phone: 201-277-1020

Apple

Star Blaster, Suicide, Falcons, Warp Destroyer, Martian Soil, and others

Program Design, Inc.
11 Idar Court
Greenwich CT 06830
Phone: 203-661-8799
Phone: 203-792-8382

Atari, C-64

Moon Base Io, Clipper, Swamp Chomp, Star Crystals, Shaft Raider, Jerry White's Game Machine

Programmers Software
2110 N. 2nd St.
Cabot AR 72023
Phone: 501-843-2988

Apple

IFR Flight Simulator

Progressive Peripherals
2186 South Holly, Suite 2
Denver CO 80222
Phone: 303-750-5713

C-64

Gothmog's Lair, Cyberworld, Perplexian Challanger, Perplexian Challanger/Spanish Language, Wizard

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Sacramento CA 95827
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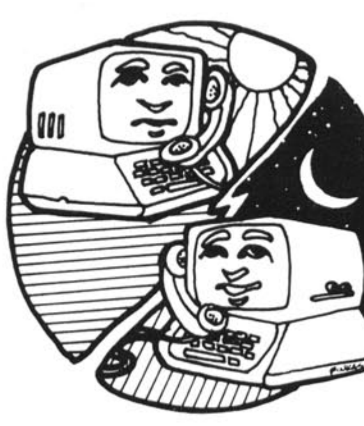
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TELE-GAMING

FANTASY ROLE-PLAYING

Patricia Fitzgibbons

Fantasy role-playing. The phrase evokes a myriad of images: lean-jawed swordsmen arrayed in plate armor; pious monks raising holy symbols heavenward; lithe elvish maids, their ears attuned to every forest sound; enigmatic mages hurling fire balls across a dungeon chamber. Ancient runes and abandoned ruins. Treasure beyond imagining. Inconceivable danger and ... glory.

Players who have conquered the computerized worlds of *Wizardry* and *Ultima* look for new and even more exciting "character development" schemes. Fantasy role-playing games, such as *Dungeons & Dragons*, *Traveller*, and *Runequest* capture the imagination. Can these complex gaming systems be played via computer and modem? They can, and are.

In this issue and the next, I'll report on the growing availability of online fantasy role-R) playing games ("FRPGs"). FRPGs of all types — from medieval conquests to futuristic space operas — may be played in real time on multi-user telecomunications systems or by messages on electronic bulletin boards. To participate in these adventures, all that a tele-gamer needs is an interest in fantasy role-playing and an online "playing field."

One such locale is the multi-user conference area ("CO") on CompuServe's Gamers' Special Interest Group ("GameSIG"). Almost immediately after GameSIG was created in late 1982, the first of many subsequent FRPGs began. A DungeonMaster, or "DM," who was an experienced FRPG'er, gathered together a group of GameSIG members who agreed to meet online once every week to play. The DM prepared several short text files which described the game, and uploaded them into GameSIG's database. These files contained basic information about the gaming system used, the rule modifications made by the DM, which character classes were to be allowed, and an overview of the "world" in which the game was to be set.

After studying the rules, the group met in the CO area and, using the online dice-rolling function, "rolled up" the random numbers which generate their alter egos' attributes (such as strength, intelligence, and dexterity). At the scheduled game time, they met in CO to commence their adventure. Somewhat ironically, the little band of comrades embarked on their fantasy quest by using computers and online communications — the seemingly magical creations of modern technology.

One of GameSIG's most active DMs is Al Williams, a thirty-eight year old software manager from Concord, Massachusetts. Al played or DM'ed FRPGs for ten years before joining GameSIG. He quickly organized groups of other members to play *Runequest* and *Bushido*. Both games have run for almost a year. Here is an excerpt from an online *Runequest* episode:

DM: As you approach closer, the features become clearer. It is a human form, surmounted by an enormous bull's head.

Elmond: Tie feet together with rope.

Lagos: Excellent precaution, young man! Shall we explore these chests?

Elmond:: And tie the hands.

DM:: You may do so, but the hands are braced half a meter apart on the axe handle, and you cannot force them closer.

Elmond: Either this is a live minotaur or it is a statue. Or, even worse, there is a medusa near by. Tie the arms to the body then.

DM:: That can be done, at the elbows. The forearms are unbound in that case.

Elmond:: Okay, check for traps on the casks.

DM:: Like to try "spot hidden?"

Elmond: Yes.

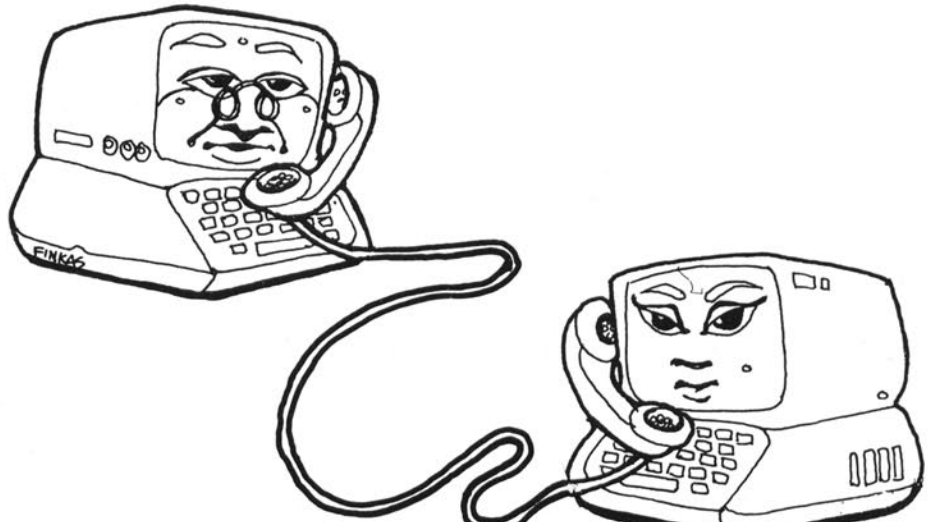
DM: Go ahead.

DICE 4/10

Elmond: Boo!

DM: Hard as you look, you can see no traps on any casks. You may try a couple of times more if you wish.

Did Elmond find any traps? If so, could he disable them? What was *in* those chests, anyway? Operating just as a "regular" DM would in a face-to-face game, Al set up the scenario for his players and stated the results of the die rolls. The players, who attempted to "stay



in character" throughout the game, made instant decisions about their choices of action as the story unfolded.

I asked Al about the advantages of online FRPGs. "There's more opportunity for imagination in online gaming," he replied, "letting you picture settings exactly as you want them. Players are also somewhat easier to get." Al's views were reinforced by another GameSIG DM, Marc Robertson of St. Louis. Marc is a twenty-five year old programmer/analyst who feels that " ... the gamers here are dedicated. I moved to St. Louis about ten months ago, and as yet I haven't found anyone here who is willing to meet regularly for *Runequest*, *AD&D*, or any other FRPG. On GameSIG, I can get together a group that will meet regularly. That's important for a good FRPG campaign."

Many FRPG'ers begin playing while in high school or college. Then, they graduate, move away, get jobs, and have difficulty forming a new gaming group. Online games, however, attract players from cities all across the United States. If a player from Tulsa drops out, the DM can replace her with a Seattle resident. Thus, these games can continue for months, even years.

Although several GameSIG DMs recruit only experienced players — one game, in fact, is for "adults only" — most encourage novices to join. GameSIG members who have little or no familiarity with fantasy role-playing are invited to silently observe any gaming session. Members may also read the transcripts of past games; these files are stored in a database.

Perhaps the most enjoyable aspects of online FRPGs are the opportunities they provide for players to meet new friends and experiment with various playing styles and strategies. Tom Woolley of Dallas, Texas started playing FRPGs in college. Now twenty-four years old, he runs an *AD&D* campaign on GameSIG. Tom likes to inject new ideas as well as "new blood" into his games. "I have the good fortune to DM a group of people that have each learned to play in a slightly different manner," Tom said. "The challenge becomes greater because you are not sure of what a person will do in a certain situation. Through online gaming I have seen and developed many new and interesting methods of dealing with situations that, with a static group, were constantly handled one way by the player characters."

Online gaming isn't cheap. Most FRPG groups commit to two hours per week of connect time which adds up to about $50 monthly on CompuServe. Besides the expense, telecommunications problems — such as slow system response time — occasionally occur. Al Williams elaborates: "Player turnover is high. System glitches, slow periods, and "drops" are frustrating obstacles to game flow. Disadvantages notwithstanding, I'm hooked!" Tom Woolley expressed similar sentiments: "It is quite difficult to explain a rather complex mapping problem or to explain something to a player who simply doesn't understand what you are talking about. However, these disadvantages in no way detract from the game as far as I am concerned. This is due to the fact that the difficulties are far outweighed by the advantage gained through meeting people from other areas of the country."

Meeting people. Those words seemed to crop up constantly in my conversations with online FRPG'ers. Of course, GameSIG members aren't actually *seeing* their new friends, and everything they learn about each other comes from a series of typed sentences that appear on their monitor screens. Nevertheless, according to Tom Woolley, the lack of in-person contact may very well promote friendship. "The online games are an added bonus for people who won't play face-to-face because of their perceptions of themselves or their personalities. Someone who cannot express himself due to shyness or even because of a physical handicap has free rein to do as he pleases online without silly prejudices getting in the way."

A five-foot tall teenager with a poor complexion can become a courageous fighter, broadsword flashing in battle, or a daring starship captain, navigating the perimeter of a black hole. An overweight housewife with a sink full of dishes may be transformed into a sylph-like minstrel or a cunning sorceress. Even a young student at the Alabama School of Fine Arts in Birmingham can take on the deified role of the DungeonMaster: "Don't tell my players how old I am! Good players, much older than myself, take me seriously here." (I won't, I promise!)

Next time, we'll look at the ways in which fantasy role-playing games are run on electronic bulletin board systems ("BBSs"). Until then, here are several modem numbers to get you started with gaming BBSs:

Cyberon — 201-226-0341
(West Caldwell, NJ)

Dragon's Lair — 213-595-9346
(Long Beach, CA)

Crystal Castle — 313-856-3804
(Toledo, OH)

Mines of Moria — 713-871-8577
(Houston, TX)

The Game Grid — 818-701-6380
(Reseda, CA)

For more information about CompuServe, call (voice) 800-848-8199.

CONQUERING WORLDS (Cont.)

seconds to get to zero.

When the game begins you control only one planet of a particular star system. The computer displays a representation of the star system with the orbiting planets and uses colors to show who has control of what planet. (The planets revolve in realistic orbits).

Each planet has a limited number of natural resources that can be extracted. At the beginning of each player's turn these resources are used to construct new ships. More materials are available for shipbuilding if the star system is completely under your control.

Ships travel from planet to planet under impulse power, using warp power for interstellar flights. Sometimes travel won't be possible due to random gravitational fields. This must be kept in mind when the enemy is closing in for the kill.

The supreme commander is always located in his base. This base can travel just like ships, however bear in mind that if your base is captured you lose the game.

The scenario for CONQUERING WORLDS is not new, and only slightly different in overall concept from other games. It is similar to **GALACTIC ATTACK** and **TITAN EMPIRE.** If you own either of the two games, you will find CONQUERING WORLDS to be similar.

James A. McPherson

Ladies and Gentlemen ...

WE HAVE A DRAW!

Robotwar Tournament Results



Rarely have we seen as exciting a finish to a gaming event as took place in the 3rd Annual CGW Robotwar Tourney. After an incredible 14 hours of play (using four computers) and 360 battles, there was a dead tie for the championship!

DRAGON4A and MUSTANG will share the Co-Championship and split the $100.00 cash prize. Stanley Chen (MUSTANG) of Bridgeport CT and Doug Hogg (DRAGON4A) of Los Angeles will each receive a check for $50.00 from Muse Software who gracious provided the case prize and trophies for the winners. Muse Software will also be sending ROBOTWAR T-Shirts to each participant. Doug Hogg, Frank Krogh (OMNI-2B), and Robert Hogg (SERPENT) attended the tournament. With four computers running at once, you can imagine what a basket case Doug was as he watched Dragon4A and Mustang go nip and tuck right down to the wire.

Twenty contestants (17 entrants and 3 fill-in robots) fought through 60 battles in the round robin. The five high scoring robots that went on to the finals were MUSTANG, DRAGON4A, NORDEN1B (Richard Fowell of Palos Verdes Estates CA), SABOTUR (Pat Bachelder of Andrews TX), and BUCWEAT (Tom Schai of Roseville MN).

In the 50-battle finals Dragon had pulled into a 6 point lead after 40 battles. But in the space of 4 battles Mustang caught him. Dragon again pulled ahead only to be caught in #48. In #49 Mustang went ahead by a single point. Then, in an incredible finish (in battle 50) Mustang helped pummel Dragon to 63% damage while only having 12% damage himself. It was looking good for Mustang. All Mustang needed was to have Dragon be elminated in the battle before himself. After a near collision between Mustang and Norden and a few more hits Dragon had 77% damage to Mustang's 44% damage. Then Dragon scores a direct hit on Mustang (D:77%/M:60%). At this point Norden is eliminated. Sabotur and Bucweat are throwing their two cents in here and there.

Then the incredible finish which took about 10 seconds. Dragon is hit (D:93%/M:60%), but before Mustang can relish his lead he scans backward at Dragon and runs into Bucweat who is sitting near the upper right hand corner of the battlefield (D:93%/M:86%). One second later Bucweat scored a direct hit on the errant Mustang and Mustang was gone! All Dragon4a needed to do was survive until Sabotur or Bucweat bit the CRT dust. But in a true Hollywood style finish Sabotur or Bucweat (we don't really know which) put a final fish, bullet, sword, what-have-you, into Dragon's creaking side and down he went. A "dead" tie (literally); 117 to 117.

****

ROBOTWAR is an Apple computer game available from Muse Software. In RW you use limited programming space to design a robot that will go onto the "battlefield" and fight against other robots. The 4th Annual Tourney will be here before you know it. Start designing now!

If nothing else, the 3rd annual RW tourney proved that the best RW robots are being designed by members of the POSTAL ROBOTWAR CLUB OF AMERICA. All five finalists are active in that group. If the one tourney per year that we run is not enough for you, or if you want to get involved with other people who love Robotwar, contact Frank Krogh (Box 5337, North Hollywood CA 91616).

The seventeen contestants in the 3rd Annual Robotwar Tourney are available on disk for $15.00. See ad elsewhere in this issue.



Frank Krogh (standing) watches one battle while Doug Hogg watches his DRAGON struggle in yet another battle.



Sipe and Krogh study the results of a battle.

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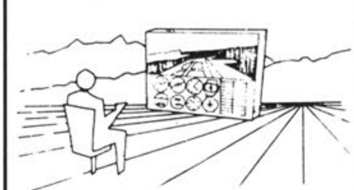
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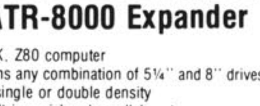
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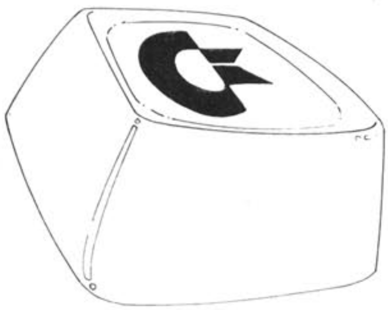
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THE COMMODORE KEY

Roy Wagner

FOR THE COMMODORE 64 ONLY

Last time I promised to tell you about some games that are only available for the C64. Most software companies now produce software for the big three (C64, Apple, and Atari) so that they can hit all of the big markets at once. I did find some software out there that, so far, is only available for the C64. Of them, **NEUTRAL ZONE** and **BEACH-HEAD,** from Access Software have been previously mentioned by this column.

POWERSTAR by Barry Kurtz from Datamagic is a space game wherein you travel down a space corridor destroying obstacles and aliens wishing to do you harm. Your goal is to pickup power crystals which must be delivered to your star bases while passing through 13 checkpoints using less than three ships. A short version of the game is also playable with only six required checkpoints. One or two can play and the high score is displayed but not saved for future reference. The game display is outstanding with vertical scrolling of your flight path.

PERPLEXIAN CHALLENGER by Steven Luedders from Progressive Peripherals & Software is a shoot-em-up-in-space (quite a popular theme lately). You sit looking out into space with gages at the bottom of the screen displaying the energy, fuel, and laser power available. Alien craft attack you, some of which release energy, fuel, or laser pods that you can attempt to pickup to boost your own supplies. One to four players can participate selecting one of four possible ship configurations. The top 20 scores with ship type and player initials are displayed between games and saved to disk. Some of the graphics and sounds were exceptional and very creative.

THE ATTACK OF THE PHANTOM KARATE DEVILS from Phantom Software is a game of karate revenge (ala Bruce Lee). Your task is to destroy the army of phantom karate devils (you only see their eyes and hands), reach the Control World and destroy the bombs located there. It is quite a challenge and your joystick provides you with all the movements necessary (walking, jumping, kicks, and punches). You must fight off much of the enemy's army and dodge oriental stars while passing through several different screens. The actions is exhausting but function key 1 lets you freeze the action.

These games showed good use of the capabilities of the C64 (sprites, sound, and hi-res graphics). They did not offer much variety, but lots of challenge.

Recently I have enjoyed playing **BC'S QUEST FOR TIRES,** a regular computer cartoon wherein you try to get THOR over all sort of adverse terrain to help CUTE CHICK. It is a lot of fun and the top 10 scores are saved to disk. I have also been enjoying the latest adventure from Infocom called **INFIDEL** in which you seek to find a pyramid lost in the Egyptian desert and obtain all its treasures. If you can figure out the hieroglyphs on the walls, they will serve as clues/hints to the many puzzles and predicaments of the pyramid. As usual for the adventures from Infocom, the dialogue can be very humorous and the images formed in your brain are certainly the closest thing to reality.

ORIGINAL PROGRAMS, COPY CLONES, or BASED ON A THEME

Our industry is currently deluged in a flood of new games, some of which are original ideas, some are based upon popular themes, and others are copies (authorized and not) of other games. Many of the successful computer games have come from games that have stood the test of time and come from classic board games (checkers, chess, and backgammon) or card games (blackjack, poker, and cribbage). Still others have come from role playing games like **DUNGEONS AND DRAGONS,** from statistical simulations of sports, and from simulation of historical/fictional combat. The most successful, of course, have come from arcade games (**SPACE INVADERS, PAC-MAN, DONKEY KONG,** and **FROGGER**). A few, however, were original computer games (**STAR TREK, ADVENTURE,** and **LUNAR LANDER**).

The number of truly original ideas has been quite small. Most of the games we see are copies or imitations of previously conceived ideas. Many of these are disappointing because they were quickly coded to make money on an idea that was making money. The games look very much like the originals when you first see the screen, but generally do not perform anything like the original. They typically are slow moving and have few of the options contained in the original.

There are also versions based on the original idea that are worth buying. In these the idea has been expanded upon and made better. The fact that it is a lot like another game doesn't really bother you. Many of this group are "authorized" by the company that produced the original. (These should be good bets it you liked the original.) Atarisoft has gotten into this business, producing versions of their popular games for all major brands of home computers.

By the time these authorized versions are available, however, I am usually tired of the original from playing it at the arcade. This is where I really like the variations on the original theme. I'm tired of **DONKEY KONG** now that Atari finally has it available for me, but I enjoy having **JUMPMAN, MINER 2049er,** and **HARD HAT MACK. Q-BERT** and its close clones don't interest me, but **POGO JOE** I want.

In the final analysis there are no short cuts to creating a good game. The oldest of ideas can be made fresh and enjoyable by the addition of some original thought and a lot of hard work.

Special thanks to Dennis and Rob at Gamesmanship and Bob at DES for their help.

THE NAME OF THE GAME



SOFTWARE SUPERSTARS?

Jon Freeman

There has been a good deal of talk of late regarding the existence of "superstars" in the software business. What is a software superstar? Are there any? Will there ever be? Is this a case of much ado about nothing, or is there some long-term significance to "stardom?"

I confess at the outset to a substantial aversion to the term "superstar" in any context. It's a prime example of linquistic inflation: i.e., the devaluation of language through absurd hyperbole (whence the term "hype"). However, it suits our present purposes admirably, because it suggests both the image we're going to examine and the degree of accuracy we're likely to find.

As far as I can tell, software superstars belong in the same category as Bigfoot and little green men from Mars. The closest thing the computer field has to a superstar is Steve Wozniak, who's even inspired a character in a TV series ("Boz" in *Riptide*), but he's known for his hardware expertise and the US festivals, not software — and how many people would recognize him on the street, anyhow?

Who else is there? Bill Budge? Lord British? Anne (the other half of Free Fall) and I? I don't think any of us even qualify as "stars" ... yet. Admittedly, we've all been written up at least once in a large-circulation periodical (Free Fall in USA TODAY, Bill in the WALL STREET JOURNAL, and Lord British in — ahem — the NATIONAL INQUIRER), but by and large the Real World has never heard of us. No groupies, no mention in the gossip columns, no guest spots on the *Tonight* Show, no mansions in Bel Air.

In fact, even in the much smaller computer community, we tend to get no more respect than Rodney Dangerfield. Sales clerks at computer stores still regularly ask if Free Fall is involved with skydiving. Mention Lord British's real name in conversation, and the most likely response is, "Richard who?"

Some of this is likely to change.

SILICON, SI — SILICONE, NO

Resistance to software "superstars" seems to stem from two causes: taste (disliking the idea) and judgment (finding the notion unlikely).

Some of the most vocal critics of the idea are software publishers who view bylines for designers and programmers with the enthusiasm of King John for the Magna Carta. The resulting mixture of wishful thinking and heel-dragging is on a par with the self-serving arguments of the established that newcomers (any potential competitor entering the market more than a week after whoever is making the statement) just can't make it anymore. Unless you are a publisher of similar inclination, it is hard to sympathize with someone whose idea of a generous royalty is 2.2%.

More universal — and more reasonable — is a distaste for the star syndrome: arrogant, egotistical behavior elevated to an art form; greedy agents and sycophantic hangers-on; conspicuous consumption; a senseless devotion to the minutiae of a star's private life; a glaring discrepancy between perceived value and apparent reward.

Fortunately, such Tinseltown customs are likely to remain alien to Silicon Valley. It is hard to take seriously "Bill Budge's Bits & Bytes" or "Garriott's Guerillas" as prime-time network fare, Yankee Stadium filled for an Andy Greenberg lecture on PASCAL, or nude photos of Steve Dompier in a gossip magazine called SILICON SECRETS. Amusing, yes; likely, no. This does not mean we will never have software stars, however; it only means computer programmers are not going to be viewed or treated as rock stars or matinee idols.

WHO WAS THAT MASKED MAN?

A far better analogy, it seems to me, is that between the software business and book industry: i.e., the programmer or designer as author. A novelist's work goes on "behind the scenes;" it is the end product — the book — that counts. So it is with software. We want a good game; most of us don't care who the programmer is dating or what brand of toothpaste the designer uses.

This does not require best-selling authors — or software developers — to labor in anonymity. Stephen King and Charles Shultz, for instance, are certainly famous in their way; yet you would probably not recognize either one — or Dan Gorlin, for that matter — in the supermarket. In the long run, a popular game designer is as likely to appear on Johnny Carson — once — as the writer of next season's "Passion's Torrid Torrent" and as likely to return, afterward, to the same relative obscurity the rest of us enjoy.

Even if we don't have to put up with superstars and superstardom, you may still wonder why anyone would — or should — bother turning programmers into software "stars" at all.

For one thing, if programmers work as hard and bring as much pleasure as writers or musicians, they deserve similar rewards. More importantly, recognition of individual achievement goes hand in hand with increased awareness of the difference between the work produced by the best designers and programmers and the junk thrown together by hacks and plagiarists. If you think I've belabored this point elsewhere, consider the recent letter writer who swore the Atari 800 could not display more than eight colors at once. If a CGW reader and a long-time computer owner knows so little of the computer's capabilities, consider the ignorance of the novice computerist. With inexperienced teenagers in fly-by-night magazines giving rave reviews to the latest Pac-Man clone, it's little wonder most of us get stuck with second-rate software and hopeless hardware.

COMES THE REVOLUTION ...

It doesn't have to be this way.

Software stars can offer their audience — those who play the games and purchase the software — the same thing that well-known authors offer their readers: quality, consistency, the satisfaction of expectancy. Readers of Robert Parker's detective stories know the new Spenser novel will be a treat; Stephen King fans buy each new King chiller as soon as it appears. Why should software be different?

Some publishers — Infocom and Electronic Arts are obvious examples — work to instill a similar sense of brand loyalty in their customers, but publishers in analogous fields have not been particularly successful at it. Few readers remember who published the latest best-seller, and even fewer people watch *Magnum, P.I.*, because of the channel it's on. For software publishers, the presence of recognized stars can bring a measure of predictability to an industry dominated by uncertainty. Software stars will not eliminate all the bad software on the market, but they will keep some of the good stuff from being lost in a morass of mediocrity.

The key is simple enough: if designers and programmers can achieve and maintain *consistent high quality*, they will become true software stars, and the unpleasant crapshoot that is software buying may become the real pleasure we'd all like it to be.

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SURVIVAL

You are stranded on the alien world of Coryphire. Your only chance of survival is to travel 340 kilometers to an abandoned research station. Unfortunately, the planet has difficult terrain, and is populated by several carnivorous — and hungry — life forms. Your skill and cunning are your main tools for survival. You will salvage as much as you can carry from your starship and begin your trek. With a fair amount of luck, your supplies should last — if you hurry!

SURVIVAL Computer Game recreates the struggle to survive on a hostile alien world. The computer controls the encounters and displays a map showing your location. Once in an encounter, you select how you are going to respond and what weapon you are going to fire. The computer then resolves the combat. The game contains three "Survival" games, and one "Hunt" game which turns the tables on the creatures of Coryphire. Several options which will further increase the number of situations which may be played may be selected by the players prior to the playing of each game.

THE WAR OF THE WORLDS

Determined to escape their dying planet, the Martians have launched an invasion on Earth. You are Mankind's only hope of stopping the invading aliens. Unprepared, and without knowledge of how to stop the awesome aliens, you must marshal the Human forces around London to attack the Martian invaders. Time is not on your side. Soon the Martian invaders will have the toehold they need to subjugate all Mankind — unless your desperate counterattacks succeed.

THE WAR OF THE WORLDS Computer Game recreates the life-and-death struggle between the Martians and the Humans, as depicted by H. G. Wells in his classic novel. You are the commander of the Human forces, and must deal with the computer-controlled Martian invaders. The game has six pre-set levels of play, as well as a game version which allows the player to create his own level by changing key variables prior to play. The screen depicts the area around London of 1896, the landing site of the Martian invasion in H. G. Wells' novel.



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TASK FORCE COMPUTER GAMES — The NEW FORCE in gaming.

PLANET PHOTON™

"Live" Sci-fi Gaming

Photon is coming. What is Photon? It is an alien planet located in Dallas Texas. It is also the first of a new futuristic kind of high-technology, life-sized "living video game." Players wield light phasers that win (or lose) them points in a computer-controlled contest of wiles, wits and agility, competing against themselves and against time in a spacious, other-worldly setting of experimental electronic music, pulsing lights, swirling fog and alien planet props.

"For our customers, we believe this will be the ultimate fantasy-like, space age experience," says George A. Carter III, the 38-year-old innovator of Photon. Slated to open in Dallas in late March, Planet Photon's players will find themselves:

- Doing battle in a surrealistic 8,000–square–foot "extraterrestrial territory".

- Wearing the components of space-age warfare that include helmets with high-frequency radio transmitters and receivers; laser–like "guns" that trigger sensors when their bursts strike their targets; high energy battery belts and a vest that contains a microprossor to analyse and report on its wearer's activities.

- Joining one of two teams of 10 players each that begin the Photon game on opposite sides of a heavily carpeted and catacombed playing area and seek to battle their way across the floor to the other team's home base.

- Seeking to avoid the momentary, 10 second computerized disarming of their own gun which occurs when they are struck by photon beams of the opposing team or by narrow light beams that ocasionally erupt from the alien planet itself.

- Hoping to build their own point scores two or three points at a time by "stunning" members of the opposing team and avoiding being stunned themselves—and by pushing through, during the six minutes or more that the game is in progress, to te opposing team's home base, which is worth bonus points.

The idea for Photon assumed shape in Carter's mind over several months after he first witnessed the laser gun battles in "Star Wars". "At first, I had a survival-like game in mind but soon realized that what I envisioned needed to take place indoors," recalls Carter. "After all, we are dealing with combinations of microcomputers, radio frequency equipment, light sensing mechanisms, video display electronics and experimental music that oftens pushes the state of the art."



A Photon Warrior hides from his opponent behind the Alien Tower in the world's first Photon facility. The game is a totally new approach to participatory amusements and encourages a high degree of skill and agility in a fast fantasy-based, life-sized contest of wiles and wits.



Photon Warriors shoot light beams from their phaser guns. An 8,000 square foot playing area features elaborate lighting and sound equipment, a heavily mazed network of tunnels, battlements, walkways, and artificial fog machines.

moon became a penal colony where convicted criminals were sent but no supervision was provided. Heinlein postulates a society where everything is made and sold (even water and air) within a completely unfettered free-market economy. The main credo of this society was "there's no such thing as a free lunch" (TNSTAFL). Even justice was a commodity to be bought. When two people had a disagreement, they would hire a judge who would decide the case. (One common decision was to throw the offender out the air-lock.) Thus, our initial design for the new game was to have absolutely no "government intervention" or external authority.

With our main design concepts as the skeleton and our scenarios to "flesh out" our ideas, we began to design the way the game would look and work. Our world would have three kinds of terrain: river valley, mountains and plains. Each of these would affect the production of commodities. The commodities would be *food, energy, Smithore* and *Crystite.* Food was generic for all things needed for personal survival (air, water, food & shelter). Only a minimum amount of food would be needed each "turn" and once that was met there wuld be no incentive for more production. Energy would reflect all of the "variable costs of production" for the other commodities. Energy would be needed to produce any other item. Smithore was to be a mining product that was available everywhere but in variable quantities (based on the number of mountains in a plot). This commodity would be the basic "cash crop" of the planet and would have an average price that was better than food or energy. Thus, we would create a friction where players would prefer to produce Smithore because of its higher return but if everyone did ti, they would all starve or run out of energy to produce anythng. Crystite (the raw material for "Dilithium Crystals") was the most profitable product. Its price would fluctuate randomly from Smithore's average price to three times that value. Crystite deposits were not apparent to the player and would require assays to determine its underground "contours".

Shortages and surplusses of the necessities would occur and these would be "resolved" in the auctions. Thus, we felt we had the makings of a very dynamic process. During play-testing we added even more pressure to the system. We made food needs increase significantly at predictable points. (We invented a rationale that said some of your relatives had arrived from home.) Smithore was hooked into the supply of M.U.L.E.s so if no one produced it the supply of M.U.L.E.s would run out. Also, the price offered for Smithore would shoot up to twice the average price of Crystite if there was a shortage of M.U.L.E.s so that Crystite production was not always the optimum strategy. All of these conflicting pressures created a lot of action in the auctions. Prices for food could even exceed all other commodities in times of famine but would plunge immediately when a bumper crop came in.

In the first implementation of M.U.L.E., all land was sold in competitive auctions. However, this led to a runaway game where the player with the most money would get the most land and then make the most money. Thus, we had to introduce a "land authority" that provided each player with a free plot each turn. I wrote a routine that moved the cursor across the available plots from left to right as a temporary test to see if land grants would work. We got so used to it that I never go around to replacing it with some more elegant mechanic.

As we went along we developed many of the details that made the game flow better. We made the town explode up from a single plot among 45 on the map to a full screen when you entered it. This gave more resolution where we needed it while still making the town seem part of the map and not a *non sequitur* screen. We made the bar charts (that tell players their status in each commodity) animate through the phases of usage, spoilage and production. This helped people understand the flow better. We made production occur on the map screen as a process that builds suspense rather than giving the final results that the computer already knew. We added "ticking timers" (which get faster as the time is running out) that both inform the player and build excitement. Some items were a result of mistakes that looked neat. On the summary screen, a character was accidentally made double size and we decided to use it on the last turn to denote the winner.

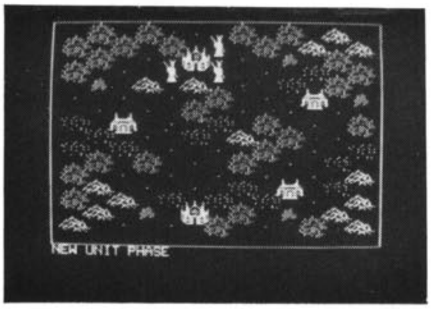
Many thngs were also taken out as the design was executed. Depletion of Crystite as it was mined, claim jumping, loans between players, and bankruptcy to mention a few. Overall, we discovered that the best option was usually the simplest one. It is often difficult for a designer to prevent "creeping complexity". You want to keep adding things that will make the game more interesting. However, the more separate items you add the more likely you are to dilute the design rather than enhance it.

The last pieces written into the game were the best as far as I am concerned. Random outcomes (earthquakes, pirates, fires in the store) added the unpredictability needed in any game. "Chance cards" that affected individuals added a personal touch while also adjusting player standings somewhat. (The winner can ony get bad luck and the loser can only good luck.) Collusion in the auctions allowed players to make private deals to help each other or to thwart an opponent. This provided the flexibility we were after. The worst part of the game design was the solitaire play. But we took refuge in the fact that M.U.L.E. was a multiplayer game. (Single player M.U.L.E. is considerably better than single player Monopoly!)

Curiously, the single element of M.U.L.E. most often noted has nothing at al to do with the game! It's the original "rock theme" that we commissioned Roy Glover to write. It used to bother me that out of the 300K of source code and the 18 man-months of work the thing people noticed most was the thing that took the least effort. But now I've resigned myself to the point that anything that makes people enjoy our product sounds good to me!

Dan Bunten is the author of ***COMPUTER QUARTERBACK, CARTELS & CUTTHROATS,*** *and* ***CYTRON MASTERS.*** *He is also the lead designer of the Ozark Softscape group that wrote* ***M.U.L.E.*** *and* ***SEVEN CITIES OF GOLD.***

Micro-Reviews



NAME:	**Parthian Kings**
TYPE:	**Strategic/Fantasy**
SYSTEM:	**Apple II**
AUTHOR:	**David W. Bradley**
#PLAYERS:	**1 to 4**
PRICE:	**$25**
PUBLISHER:	**Avalon Hill Baltimore, MD**

The King is dead, and the kingdom is in chaos. Who will gain control of the fallen crown? Will it be you, or one of your less worthy opponents? Only you can decide the issue, with your decisions turning the balance for or against your casue. The King is dead! Will you be the next to mount the throne?

In **PARTHIAN KINGS** (PK), each player must make several early decisions which may press him to an early victory, or condemn him to an inevitable defeat. This is due to the fact that the players control many factors not usually given to manipulation. These factors include in order of their occurrence: the name and characteristics of their army's units, the selection of their capitol from the available towns, and the make-up of their armies from the previously designed units. The players must also decide on several factors which concern them all equally. These include the map's terrain, the number of towns and their features, the number of players (up to four, with the computer being able to control up to three of these), and whether or not magic is to be used.

One of the two most important decisions that the player must make is the design of his army's units. Each unit type is first named, then assigned hit points, attack strength, long or short or no range fire, armor factor, and a movement allowance. The computer will then, using the information specified, determine the unit's cost and give you the option of accepting the created unit type or rejecting it and trying again. As you are limited to creating only five unit types, their design is critical and will either help or haunt you throughout the game.

The other decision that you need to consider carefully is the selection of your capitol. If you are the third of fourth player, then you may be faced with the least of evils for a choice. It is for this reason that the last player(s) should be given the task of placing all or some of the towns. This caution is justified due to the fact that if your capitol falls, you then lose the ability to raise taxes or create new units.

There are two different army designs to consider based on the choice to have magic or none in your game. If the game is without magic, then it is best to have a well balanced design for your army's units, as both the weakest and strongest possible units have their uses. This is changed considerably by the introduction of magic. Due to a spell which your wizard will normally gain early in the game (OSCARDE, which randomly adds to the number of one of your five types of units), it is advantageous to have one inexpensive but balanced unit and four maximum units. This would mean that the successful casting of this spell would give you an 80% chance of gaining units, each of which would normally cost an entire turn's income early in the game. This can give you a great advantage at a point when you can reap the greatest benefit. It can, however, be turned against you should you allow an opponent to bring his wizard within range of your capitol, due to the reversed effect this same spell has when cast upon enemy towns.

One potentially weak point of PK is its lack of a save game option. This is largely made up for, however, by the inclusion of an option which allows the players to specify a long or a short game. The long game continues until there is a sole King. With the selection of the short game, the number of turns in the game is determined by the playrs (five turns being suggested for a short game).

Other features of PK include very good solitaire play, a well written and clearly laid out rule book, and the ability to save your army designs and scenario maps on a separate disk (actually this latter ability is required). One wonders why, considering the mandatory saving of these factors on disk, the game itself could not be saved to disk. Just another of life's little mysteries.

Parthian Kings is a very challenging game due to the large role the player has in developing the factores which determine his starting position. The play goes smoothly once the dynamics of unit movement is mastered and combines with the setup options to give you a tremendous feeling of control. As a good example of the new crop of military games with a fantasy setting, PK has those features which should insure that you will continue to play it for a long time to come. The King is dead, and the Kingdom waits to find out who will next mount the throne.

Curtis Edwards



NAME:	**Planetfall**
TYPE:	**S.F. Adventure**
SYSTEM:	**Many**
#PLAYERS:	**1**
AUTHOR:	**Steve Meretsky**
PRICE:	**$49.95**
PUBLISHER:	**Infocom Inc. Cambridge, MA**

Planetfall is a text adventure game that begins with you, a lowly ensign, scrubbing the decks of the Stellar Patrol Ship *Feinstein*. Your life has never seemed worse, and your future looks very bleak, boring, and uneventful. Right about this time your ship is rocked by an explosion. In order to save your life you rush to the nearest escape pod and are jettisoned out into space. By using your wits, you are able to ride the escape pod down to the nearest inhabited planet. There you are marooned on one of two islands on the planet.

Your mission, besides finding food and a safe place to sleep, is to get rescued from the planet. But your first order of business is survival. Finding a safe place to sleep is not difficult but you must find food before your emergency ration kit runs out. Once you have the food supply and know where it's safe to sleep you can begin your real adventure (Watch out! In this adventure you can even get sick and dream while you sleep.)

On the island you will find two huge deserted complexes which must be mapped (Kalamontee and Lawanda). In your wandering through the first complex you will meet a robot named Floyd. In the beginning, Floyd might be a nuisance because of his incessant babbling, but as you have probably already guessed he

plays an important part in the completion of the game. Floyd's interaction is a very unique concept in this game. It adds animation to the game without relying on graphics. (In certain parts of the complex I had already mapped I found myself hurrying through the rooms. As this left Floyd far behind, I ended up slowing down to wait for Floyd to catch up.)

There are more than 100 rooms in Planetfall and each one has its own very detailed description. Part of the enjoyment to these games is just reading these descriptions. I found myself wanting to know more about the complex — why for example, it was deserted, and where all the people went.

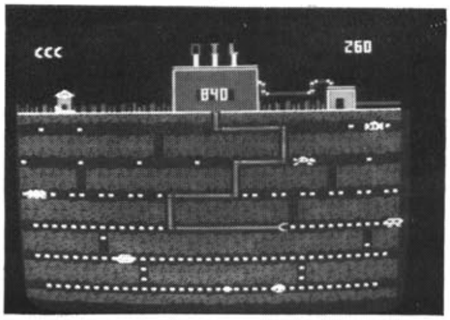
The puzzles in Planetfall involve special access cards, tools, and the fixing of machines that have broken down. I found the solutions to be logical with just enough depth to give me problems but not enough to cause me aggravation.

The documentation is almost as enjoyable as the game itself. With the software you get a diary, post cards, an I.D. card, and a manual. The diary looks handwritten and is on Stellar Patrol letterhead, it tells about a few days of the Ensign's boring life. The post cards are very funny. The manual as always should be read carefully. Often the problems you run into throughout the game can be made easier with the help of some clues or explanations from the manual.

For those of you that are text game or Infocom fanatics this is another excellent adventure to add to your collection. The addition of Floyd the robot as your partner is a unique boost to the interactive nature of these games and I hope to see more of this type of creative innovation in future games.

For those of you who have never played these types of games before, Planetfall would be a good place to start.

James A. McPherson



NAME:	**Oil's Well**
TYPE:	**Arcade**
SYSTEM:	**Apple, Atari, C-64, Coleco**
FORMAT:	**Disk or Cartridge**
#PLAYERS:	**1**
AUTHOR:	**Thomas Mitchell**
PUBLISHER:	**Sierra On-Line Coarsegold, CA**

Oil's Well (OW) develops the old "clean out the maze" concept in a fun, new way. To see OW in your mind's arcade do this: imagine Pac-Man on a tether that you can retract with the touch of a button. He enters at the top center of the maze and snakes his way at right angles munching up dots (oil pellets) and avoiding the touch of his foes (Oozies and Land Mines) who continuously glide across the screen. Clear out one screen and you get another, tougher one. Essentially that's Oil's Well.

You can select three speeds for the Oozies and Land Mines. The speeds are cutely named *Regular, Unleaded,* and *Premium.* Regular is reasonable, and Unleaded is tough. Premium, though, is so fast that it might have been more appropriately named Rocket Fuel.

In the more difficult mazes there's less distance between some turns and there are fewer easy routes — a feature which makes it more challenging for you to get to some of the Oil Pellets. After you mine an oil field, your refinery (located at the top one-fourth of the screen) appears closer to completion. If you clear out all eight of your fields you can retire or select a higher speed and start over.

The cast of characters in OW is well-balanced; there aren't so many bad guys that you feel hopelessly overwhelmed. And, getting ahead isn't *too* easy. You feel like you gain points the old fashioned way ... you EARN them.

At the beginning of each game you get three Drill Bits which last about a minute and half each. The drill bit and pipe retraction is, perhaps, the most amusing feature of the game. By just slightly touching the trigger button you can partially retract them. This maneuver allows you to get out of danger's way in a hurry while staying deep within the underground maze.

While clearing screens you rack-up ten points for each Oil Pellet you munch and 1000 points for each super-charged deposit called a *Goblet.* This makes the Goblets important since every 10,000 points you get an extra drill bit. Another element on your side is the *Petromin,* a sort of power pellet located deep within each maze that slows down the Oozies for a few seconds and allows you to gobble up deeply buried Oil Pellets.

The bad buys in this game prey on your two weak spots: your pipe and your drill bit. The Land Mines detonate when your Drill Bit touches them; though they pass right over your pipe without damage. The Oozies work just the opposite of the Land Mines, destroying your pipe just by touching it while your Drill Bit can munch them right down (and get 20 to 170 points each for doing it.)

Oil's Well is a very good game. But for a few minor flaws it might have been a great game. OW lacks a few of the standard features that many hard-core home arcaders have come to expect; high score save to disk and two-player competition mode. Also, the underground creatures

Continued on p. 46

NAME:	**Conquering Worlds**
TYPE:	**Space War Game**
SYSTEM:	**Apple II**
FORMAT:	**Disk**
#PLAYERS:	**1 to 3**
AUTHOR:	**Walt Hochbrueckner**
PRICE:	**$29.95**
PUBLISHER:	**Datamost**

CONQUERING WORLDS is a space wargame with both strategic and arcade action. As the Supreme Commander of your civilization you must conquer and capture planets from the enemy(s) civilization(s).

There are two types of games that you can pick from; you can either choose to defeat all of your opponents or to conquer all of the planets. There doesn't appear to be any difference in the way the game is played under either type. It just makes a difference as to how the game is scored in the end. Whichever is picked, when the end occurs the computer will calculate your score, and keep a record of it.

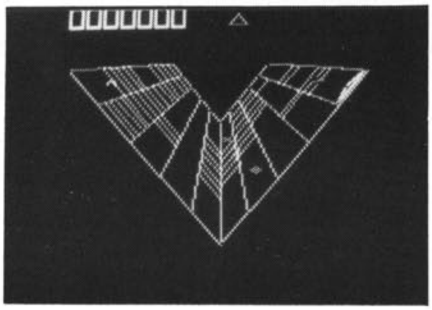
You are able to play against the robot (computer) alone or you can also have up to two additional human players. Depending on the size of the game you desire you can also choose from 4 to 32 star systems where each star has 2 to 8 planets in orbit.

Each turn of the game covers a period of 10 years. During these 10 years (120 months) you can move your ships between planets or between stars as well as change the location of your base. Since you can only get detailed information on the star system where your base is you have to move your base to get new information. You have to be careful here because, when you move your base between star systems, there is a random chance that the star system you warp to will be completely controlled by the enemy and you will have to battle it out to the end. If you lose, you not only lose your ships but your base as well.

When you warp to a new star system or planet and attack you enter the arcade mode. If you do not care to do the arcade game you can preset the game parameters and have the computer determine the outcome. (The arcade portion became repetitious and uninteresting after a few rounds so I changed over to the automatic mode, with no real loss). The arcade shoot-em-up results are based strictly on who has the last ship still flying around, so I always tried to attack with around 7 to 9 ships. This way the screen is not too crowded with my ships, which would increase the chance of a random hit, but would also be of a substantial quantity so that I would have at least 2 chances to attack. Each attack wave is a countdown of 100 time units which typically takes 30

Continued on p. 35

AXIS ASSASSIN



Trip Hawkins, President of Electronic Arts says he wants EA games to be simple to learn, hot (full of action) and deep (they grow with you). Axis Assassin definitely meets all these criteria.

You, the famed Axis Assassin, can fire forward or, by reversing direction, behind you, and can move in any of four directions. With only three ships, you are engaged in a fierce fire fight with a whole slew of deadly enemies. Your battle ground is a geometric shape suspended in space and infested with *Hunters, Spinners, Drones, Spores* and *Mutant Guards.* For each successful traverse of a web (one of the geometrical figures) you gain a thousand bonus points and the dubious honor of moving on to a different and more dangerous design of web.

For each web you have a single *Pulse Bomb* which, when set off, will disintegrate every fighter in the web. If you time it perfectly, and detonate your pulse bomb just as you are prepared to blast your way on to the next web, you can instead blast your way into *The Nest* for a deadly encounter with The Master Arachnid. Be careful, though, for this may only be a more sure way to die. Should you actually survive your encounter with the Master, you will emerse back onto another segment of the web having gained another Assassin to help in your quest.

When you've completed twenty web sweeps, you'll be elevated to the even more deadly environs of *Zone Two,* where the battle becomes, if anything, more intense and challenging. At the ultimate levels you'll eventually run across the yellow *Xterminators,* who never die except in pairs. Good Hunting!!

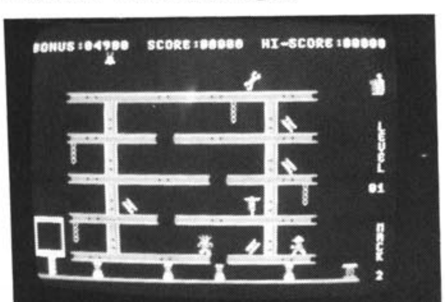
Axis Assassin is strongly reminiscent of the arcade game Tempest. You score points for blasting web strands, fighters, and for surviving web sweeps. The most frustrating part for me was having fighters slip sideways across the web to zap me. The hardest part of the game itself, at least to this poor finger twisted writer, was trying to survive the encounters with the Master Arachnid. In just about a month of playing the game, I've come back from the nest only three times. Usually, I find it no more than a spectacular way to suicide.

This game is definitely fast moving with very nice graphics. From a design point of view, my only complaint is that the joystick controller gives you a little too much mobility. Many many times I found myself shooting completely across the web when I really only wanted to go a strand or two. In using your pulse bombs, try to be patient. Remember that you only get one per web sweep, so hold off until the whole bloody web seems filled with fighters, then zap them all into oblivion. Don't hold off too long, though, since a pulse bomb at the precise instant of transfer to the next web will detour you into The Nest. And, as stated above, even if you're not ready for it, the nest will be ready for you.

As suggested on the game package, try to hug the bottom and sides of the web as long as possible, and really try to avoid looking at your score while playing. It's a sure way to bite the dust. . . stardust, that is.

David Long

HARD HAT MACK



Hard Hat Mack (HHM) is another arcade game by San Mateo based Electronic Arts. HHM requires you to complete three distinct construction duties while avoiding *Vandals, OSHA Inspectors,* and a variety of other on-the-job hazards.

Level one involves picking up four sections of girder and placing them in four gaps found in the building. You automatically pick up the girder sections, and just as automatically put them down in the holes when you cross them. You can jump over the holes and can also jump off the edge of the construction area. Jumping off of the left edge is suicide, but at the bottom of the right edge lies a springboard which, when you time your jump correctly, will usually bounce you back up to the level just above where you jumped off. The only exception to this is when you jump off of the very top level, which then lands you back on the lowest level. You can also move up and down by climbing the chains between levels, and through utilization of the elevator which runs along the left edge of the building. The elevator is normally found at ground level, but by jumping up and ringing the bell at the top you can call the elevator up to you. The catch at level one is the bouncing *rivet.* This lovely bouncing beauty falls, with semi-regularity, across the screen, and, in spite of your hard hat, will wipe you out if it hits you. At any rate, in between the rivet, the vandals, and the OSHA inspector, you have to lay all four sections of the girder in place, and then grab the rivet gun (not to be confused with the bouncing rivet) and rivet them in place. When you've finished this, you'll receive a bonus (the faster, the better) and move on to level two. At level two your task is to gather the lunch boxes which are scattered about, while still avoiding the various job hazards. These include the *crusher,* the *pinchers,* the *heater,* and the *dynamite keg.* Once you've touched all the lunch boxes (when you touch them they disappear), you must ride the moving girder to the top. From there, you must jump to the conveyor belt with perfect timing to avoid the blast furnace and have the magnet lift you up on to level three. The hardest part of this level, at least for me, was avoiding the crusher and the pinchers.

Level three is, in my opinion, the easiest. You use the twin springboards at the bottom and a moving elevator / conveyor belt to collect metal ingots and drop them into the rivet making machines at the bottom. Here, as at all other levels, you must watch out for the vandals and OSHA inspectors, but most of the other traps are fairly easily avoided.

After level three, you have the pleasant duty of going on to level four, which is a more difficult version of level one in that there are *two* bad guys after you instead of one. Again the bouncing rivet is the worst danger to your continued career, but you should also be careful not to get caught between the two vandals / OSHA inspectors.

HHM appears to me to be a brand new concept in arcade action. In the first place, nobody has ever made a game out of the construction industry of which I've heard. Secondly, although at first glance this might be taken to be similar to Donkey Kong, Apple Panic, or Miner 20 49er, the resemblance ends there. Thirdly, you can continue virtually forever, or as long as your supply of HHM's hold out. You start the game with three and get only one additional man at 7000 points with no further reinforcements. One minor anomaly does exist. Your bonus points count down from the time you begin working on a level, but they reset to the maximum when you loose a Mack. For example, at level two you can successfully gather all the lunch boxes and see your bonus drop down to around 2000 or 1500. If you then suicide, the bonus will jump back up to 5000 and you will make it to level three with at least a 4500 bonus. So, in the short run, you can score higher by selective suicide. In the long run, however, with only one bonus man, you'll have to find a better tactic. I've been playing HHM for nearly six weeks, and it isn't getting old yet.

Remember to pick up as many bonus objects as you can, and watch out for the bouncing rivet . . . and when you break 100,000 points, do write in and let us know.

David Long

TAKING A PEEK (Cont.)

DAWN OF CIVILIZATION: Strategy game for 1 to 4 players which abstracts the spread of man at the beginning of civilization. The object is to have the largest number of tribes on the board at the end of play. Players build legions, cultivate farms and manage food and land resources for their growing populations. Atari.

Strategic Simulations
883 Stierlin Rd. A-200
Mountain View, CA 94043-1983

QUESTRON: If you liked Ultima, this is the game for you. Similar enough to Ultima that SSI has a licensing agreement with Richard Garriott, Questron takes you into the Empire of the same name. You must find Mantor and steal his Book of Evil Magic. Questron is a circumnavigable world of some 57,000 squares that contains a large variety of interests. However, as we can tell you from experience, don't run to the nearest gambling hall after each "find". Kirk, you have got to be more conservative with your money! Review coming. Apple, Atari. $49.95.

Sublogic Corp.
713 Edgebrook Dr.
Champaign, IL 61820

FLIGHT SIMULATOR II: To put it simply, every Apple owner should have a copy of this program. It is an outstanding example of what can be done in 48/64K. Not to mention the fact that it does an excellent job at simulating small aircraft flying. Over 80 airports are included in four scenery areas: New York, Chicago, Seattle, and L.A. Other scenery areas are available seperately. Sublogic is pursuing the possibility of FAA approval of FSII as a training device. Apple 48/64K. (IBM Flight Simulator by Microsoft is same program). Atari and C-64 versions coming.



SCORPION'S TALE (Cont.)

no problem at all; getting in should be equally easy. What's that? You say you don't have a silver rod? Sure you do, you just don't realize it yet! Its location will become obvious after the great shake-out; just think about that for awhile.

Now, the other bubble is a slightly different matter. You can't just walk over to it, or climb up to it. However, as you might have suspected, there is a way to get there. If you recall your physics, for every action, there is an equal and opposite reaction.

Once you arrive at and enter the other bubble, you will find a use for all the remaining rods. Here you are on your own, as what needs to be done can be determined only by trial and error (although again, if you know some physics, part of this will be easier). But, when you figure out the exact sequence of moves, you will bring the game to a triumphant conclusion!

Well, that seems to be about it for "Starcross". Next time, we'll talk about a game that is much different and full of magical happenings: Enchanter. 'Till then, happy adventuring!

* * * NOTE! * * *

Just after the February issue went to press, I was notified that my mailbox place would be closing at the end of January. They continued to hold mail for current customers until about mid-February; after that, all mail was returned to sender. Since CGW was already printed, there was no way to get a notice in about the change. My apologies to any of you who had letters returned because of this problem. Of course, I have a new mailbox, and you can now write to me at the following address: Scorpia, 207 E. 85th St. Suite 240 New York, NY 10028. I would also like to remind correspondents that, if you want a personal reply, you MUST include a self-addressed, STAMPED envelope (however, this does not apply to readers living in foreign countries where American stamps are unavailable)!

For those of you who are online, I can be reached on the Source at ST1030, and on CompuServe on page GAM-310.

OIL'S WELL (Cont.)

lack internal animation. (These criticisms aren't meant to imply that the game's not fun — it's lots of fun.)

The action's well-paced, the difficulty progressive. While getting to a higher level is somewhat dependent on getting the right breaks — good eye-hand coordination, timing, and strategy are essential. Oil's Well offers an exciting treatment of a maze-munch game that you won't grow tired of after ten or twenty plays.

Dave Stone

CARRIER FORCE (Cont.)

all day long. All other aircraft would do well to be back on the ground by nightfall, since operational accidents increase at night.

Depending on aircraft type, planes can travel a certain number of hexes each hour (hexes are 50 miles wide). As each plane or group of planes passes through a hex, search occurs. The quality of that search can be improved by "spending" more of that hour's movement points searching the same hex more intensively. For example, an aircraft capable of traveling 150 miles in one hour could:

— travel the full 150 miles, expending one movement point in each of the three hexes in the course of a cursory search.

— spend two of the three available movement points in hex, then after locating nothing, move on to another hex and spend the last point searching in the new hex.

— spend all three points searching in the same hex.

Once air groups are created, all the player must do is decide the direction in which the group will fly. As each movement point is expended the computer conducts searches, and if something is spotted the player receives a report of the sighting and a symbol is displayed on the map noting the location of an enemy task force.

This simple act of computer-mediated search is the glue that holds CF together. It is swift and exciting, and it can be frustrating. Search planes are unarmed, and if they are jumped by CAP they always get shot down. And it is here that one flaw surfaces.

Whenever air combat of any kind takes place, the location of that combat is shown on the map. Whenever a search plane is jumped by CAP the searching player is notified that the plane has been shot down, and the hex in which it happened is indicated on the map. Common sense tells you that if a search plane is jumped by CAP over a certain hex, then there must be something of consequence steaming along on the surface in that hex. Essentially, what this means is that a search plane that is jumped by CAP will always manage to get off a radio message of the sighting and location before he goes down.

□ □ □

Picture yourself sitting in the Combat Information Center aboard the Lexington at Coral Sea, watching air groups inching across a map towards the marker that denotes the last known position of a Japanese task force.

Whether or not the enemy TF has been spotted by a search plane during the hour, attacking air groups, logically enough, must also spot the target TF on their own. And the farther from home an attacker flies, the greater the chance that he will fail to spot the enemy. Weather conditions can also prevent spotting a target.

So there you sit, having shot your bolt, waiting for the Lexington's SBD Dauntless dive bombers, now approaching the end of their tether, to arrive over the target. On the map the air group marker moves onto the target hex, eclipsing the symbol denoting a Japanese task force. The SBDs have less than an hour before they must turn around, otherwise they will fail to make it back to their carriers.

The SBDs are directly over the IJN task force, but in the deteriorating weather they cannot spot their target. One movement point is used. Only one more remains.

You order the bombers to continue the search and they do, with still no ships spotted. The SBDs have failed to find the target. Faced with the prospect of losing the entire squadron to ditching, you reluctantly steer the bombers back towards the Lexington, and steer a course for "point option" where you will retrieve your aircraft.

There is another side to that coin, though. On more than one occasion my radar has detected an incoming raid, my CAP has intercepted incoming attackers, that, and the weather meant that the Japanese were unable to spot and attack my ships. The weather is impartial.

□ □ □

Task force movement is accomplished in an effective manner. Each hour, task forces accumulate movement points, which are then expended through such things as changes in headings, and air operations. When a task force has accumulated 50 movement points, it moves into the next hex on its current heading.

Aircraft carrier operations are hampered by insufficient wind across the flight deck, so it is necessary to turn a carrier into the wind for most major air operations. In addition, the deck capacity of carriers is extremely important, and the management of flight deck space is clearly the most important skill to master.

Maintaining a smooth flow of air operations is a complex task. CAP and search planes must be launched and landed. Air strikes, combining fighters, bombers, and torpedo planes must be launched, formed up overhead, and sent on their way. Meanwhile, there are aircraft returning and circling overhead, waiting for the chance to land. And you, in overall command, must keep track of wind direction, heading and traffic on the flight deck. Not surprisingly, a task force that is busy with air operations, frequently moving into the wind to conduct those operations, will make little headway in any direction but directly into the wind during a period of extended air operations.

□ □ □

Gary Grigsby aptly describes the computer opponent as "not terribly creative tactically, but his staff is superb." And indeed it is. While you are grappling with the problem of having been too aggressive, having launched so many bombers that you must watch an entire squadron of fighters in the landing circle ditch for lack of available deck space, you will be chagrined to realize that the Japanese computer opponent does not make that same kind of mistakes.

There are some limitations to the structure of the program that make it rather unforgiving, and thus, give the computer opponent an edge. For example, once an air group has been placed in the Landing Circle the group cannot be "waved off" ... it must land in the next hour, and it must land in the task force in which it was designated to land during the previous hour. If you have a one carrier task force, even if it occupies the same hex as another carrier task force, and if there are no air operations left for the designated carrier, there is no way for you to safely land those planes on an alternate carrier. The lesson then, is to always be aware of your aircraft situation.

CF lends itself to having two human players share duties in a game against the computer opponent. It is a handful to plot and log effective search patterns without either missing an area or duplicating searches. It is also a chore to keep track of aircraft operations such that returning aircraft have a place to land. And, it is a chore to make sure that attack aircraft can reach their targets and still get back to their carriers, especially if those carriers must zig-zag into the wind to launch or retrieve planes while the strike is enroute to its target.

Dividing those duties among two or more players, so that one player is the overall TF commander, and the other is either an individual carrier commander or the overall group commander, will allow for more people to participate without slowing down the game. It will also reduce the likelihood of a bookkeeping foul-up that could strip a carrier of many of its planes. In initial playings of CF, I have found more of my plane losses coming from such foul-ups than from Japanese actions.

CF has been exhaustively researched, and beautifully produced. In many ways it is the kind of game that we had in mind several years ago when we were daydreaming about where the wargaming hobby was headed now that the computer had arrived. The tedium of bookkeeping is gone, replaced with the real feel of the "fog of war."

Tom Cheche provided historical research in the development of CARRIER FORCE.

Reader Input Device

R.I.D. was prepared with the help of SPEED STAT by SoftCorp International, Westerville, OH 800-543-1350

See page 50 for details on the Reader Input Device

Game Ratings

7.78	**M.U.L.E.**	**Electronic Arts**	**Atari, C-64**
7.75	**Wizardry**	**Sir-tech**	**Apple**
7.61	**Ultima III**	**Origin**	**Apple**
7.59	**Archon**	**Electronic Arts**	**Atari**
7.40	**Zork Series**	**Infocom**	**Many**
7.22	**Carrier Force**	**SSI**	**Apple, Atari**
7.19	**Combat Leader**	**SSI**	**Atari**
7.17	**One on One**	**Electronic Arts**	**Apple**
7.13	Murder on the Zinderneuf	Electronic Arts	Atari
7.09	Knight of Diamonds	Sir-tech	Apple
7.09	Knights of the Desert	SSI	Many
7.07	Lode Runner	Broderbund	Many
7.05	The Cosmic Balance	SSI	Apple, Atari
7.04	Blue Max	Synapse	Atari
7.04	Pinball Construction	Electronic Arts	Apple, Atari
7.03	Eastern Front	APX	Atari
7.03	Choplifter!	Broderbund	Many
7.00	Computer Baseball	SSI	Apple, C-64
7.00	Guadalcanal Campaign	SSI	Apple
7.00	Music Construction	Electronic Arts	Apple, Atari
7.00	North Atlantic 1986	SSI	Apple
7.00	Operation Whirlwind	Broderbund	Atari
6.98	Southern Command	SSI	Apple
6.97	Olympic Decathlon	Microsoft	Apple
6.96	**Geopolitique**	**SSI**	**Apple**
6.94	Shattered Alliance	SSI	Apple, Atari
6.93	Galactic Gladiators	SSI	Apple
6.93	Legionnaire	Avalon Hill	Atari
6.93	Star Blazer	Broderbund	Apple
6.92	**Infidel**	**Infocom**	**Many**
6.92	Starcross	Infocom	Many
6.92	The Quest	Penguin	Apple, Atari
6.91	Castle Wolfenstein	Muse	Apple
6.91	Deadline	Infocom	Many
6.91	The Warp Factor	SSI	Apple, IBM
6.89	Necromancer	Synapse	Atari
6.88	Cartels & Cutthroats	SSI	Apple
6.87	Crisis Mountain	Synergistic	Apple
6.87	Miner 2049er	Big 5/Microfon	Apple, Atari
6.87	Planetfall	Infocom	Many
6.86	Pursuit of Graf Spee	SSI	Apple
6.84	Battle for Normandy	SSI	Apple, Atari
6.82	**Computer Ambush**	**SSI**	**Apple**
6.82	Cytron Masters	SSI	Apple, Atari
6.82	Germany 1985	SSI	Apple
6.81	Championship Golf	Hayden	Apple
6.81	Chess 7.0	Odesta	Many
6.81	Fighter Command	SSI	Apple
6.81	**Ultima II**	**Sierra On-Line**	**Apple, Atari**
6.77	Galactic Adventures	SSI	Apple
6.76	Rendezvous	Edu-Ware	Apple
6.76	Shamus	Synapse	Many
6.75	Reach for the Stars	SSG	Apple, C-64
6.75	President Elect	SSI	Apple
6.73	Star Maze	Sir-tech	Apple
6.71	Dnieper River Line	Avalon Hill	Many
6.67	Computer Gin Rummy	Datamost	Apple
6.66	Astro Chase	First Star	Atari
6.66	Napoleon's Campaigns	SSI	Apple
6.65	Escape from Rungistan	Sirius	Apple
6.61	Witness	Infocom	Many
6.60	Ali Baba/40 Thieves	Quality	Apple, Atari
6.58	Suspended	Infocom	Many
6.57	Hard Hat Mack	Electronic Arts	Apple
6.56	David's Midnight Magic	Broderbund	Many
6.54	**Bomb Alley**	**SSI**	**Apple**
6.54	Ultima I	Cal Pacific	Apple
6.52	**Jumpman**	**Epyx**	**Atari**
6.51	Broadsides	SSI	Apple
6.50	Sherwood Forest	Phoenix	Apple
6.47	Epidemic	SSI	Apple, IBM
6.46	Ringside Seat	SSI	Apple, C64
6.45	**Soloflight**	**Microprose**	**Atari**
6.45	Tactical Armor Command	Avalon Hill	Apple
6.45	Worms	Electronic Arts	Atari
6.40	Apventure to Atlantis	Synergistic	Apple
6.40	Tigers in the Snow	SSI	Many
6.39	Galactic Attack	Sir-tech	Apple
6.39	**Drol**	**Broderbund**	**Many**
6.33	**Starbowl Football**	**Gamester**	**Atari**
6.29	Paris In Danger	Avalon Hill	Atari
6.28	Temple of Apshai	Epyx	Many
6.27	Mask of Sun	Ultra Soft	Apple
6.26	Swashbuckler	Datamost	Apple
6.21	Crush, Crumble Chomp	Epyx	Many
6.20	Zaxxon	Datasoft	Many
6.19	NATO Commander	Microprose	Atari
6.17	Fortress	SSI	Atari
6.17	Frogger	Sierra On-Line	Apple, Atari
6.16	A2-PB1 Pinball	SubLogic	Apple
6.15	Cannonball Blitz	Sierra On-Line	Apple
6.11	A2-FS1 Flight Simulator	SubLogic	Apple,TRS-80
6.07	Old Ironsides	Xerox	Apple
6.04	Robotwar	Muse	Apple
6.02	Way Out	Sirius	Apple, Atari
6.00	Cosmic Balance II	SSI	Apple, Atari
6.00	Empire of the Overmind	Avalon Hill	Many
6.00	**Rainbow Walker**	**Synapse**	**Atari**
6.00	Spy's Demise	Penguin	Apple, Atari
5.99	Swordthrust Series	CE Software	Apple
5.94	Labyrinth	Broderbund	Apple
5.92	Time Zone	Sierra On-Line	Apple
5.89	Bilestoad	Datamost	Apple
5.87	Marauder	Sierra On-Line	Apple, Atari
5.84	Close Assault	Avalon Hill	Many
5.79	A.E.	Broderbund	Apple
5.79	Aztec	Datamost	Apple
5.77	Snack Attack	Datamost	Apple
5.77	Torpedo Fire	SSI	Apple
5.77	Beachhead	Access	C-64
5.76	Tactical Armor Command	Avalon Hill	Apple
5.76	The Arcade Machine	Broderbund	Apple
5.75	Battle of Shiloh	SSI	Many
5.70	Serpentine	Broderbund	Apple, Atari
5.68	Andromeda Conquest	Avalon Hill	Many
5.67	Blade of Blackpoole	Sirius	Many
5.36	Gruds in Space	Sirius	Many
5.33	**Mr. Robot**	**Datamost**	**Atari**

"BEAT TO QUARTERS! RUN OUT THE GUNS, AND CLEAR FOR ACTION!"

These urgent commands of the 18th-century captain are now yours to issue as you re-enact legendary naval engagements from the age of fighting sail.

BROADSIDES™ — a new game from SSI — gives you non-stop naval action, as fast and demanding as the historical battles it re-creates.

In this two-player/solitaire simulation, the ships will be rigged, manned, and armed just like the real ships were, and will handle in the wind just as real ships sailed.

For speed of play, the ARCADE game lets you sail right into action. You set your course, maneuver and fire broadsides as fast as your crew can reload.

For authenticity and historical detail, the TACTICAL game puts you on the quarter-deck. There, you make the decisions real captains had to make: How much sail? What course for best speed? Aim your guns for the rigging or waterline? What range? Load with solid shot or grape shot?

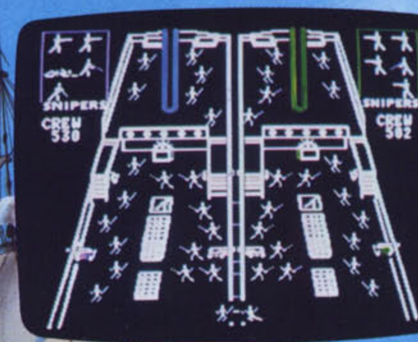
When the ships move within grappling range, your boarding parties and sharpshooters will decide the battle. As you watch the fighting on your screen, you'll give orders for your saber-wielding men to thrust, counter-thrust or hack away.

If you want to design your own ships, **BROADSIDES** lets you build frigates and ships-of-the-line from the keel up, rigging them, manning them, and arming them with everything from 12-pounders to hull-smashing carronades.

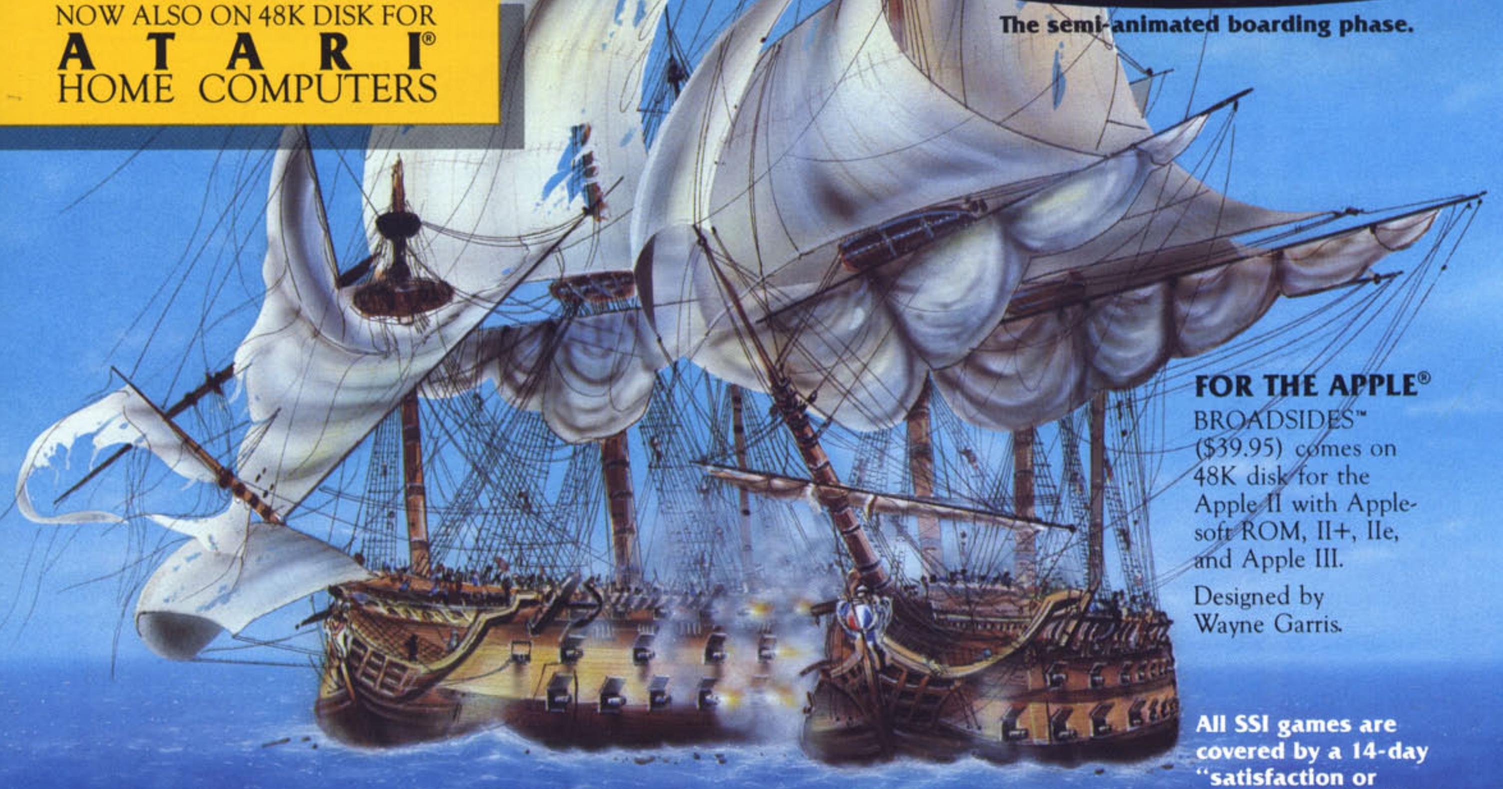
The enemy's guns have been rolled out, his sharpshooters are in his tops, and he's almost within range. The battle is about to begin.



Your ships move faster than real-time on the Hi-Res color screen.



The semi-animated boarding phase.



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Reader Input Device

There were 253 RIDs turned in by press time for this issue.

Newly rated games and updated game ratings are listed with **bold type** in the table on page 48.

GAME RATING

The table on page 48 includes games evaluated by our readers. For a game to be included in this listing it must first have been offered for rating in our regular RID rating system. Games offered for evaluation are those covered in the magazine and/or those having a good sales record during the time of evaluation. Once offered for evaluation, the game must have been evaluated by a sufficient number of readers to be included in the results. Any game not evaluated by at least 10% of the respondents was not included in the results.

Games were rated on a scale of 1 (terrible) to 9 (outstanding). Respondents were asked to consider such things as PRESENTATION (graphics, sound, packaging, documentation); GAME DESIGN (design, playability, interesting?); LIFE (does the game wear well?)

RID #13 (Use card provided)

On this page a number of games and articles are listed for evaluation. Please take time to evaluate these games and articles. Use the guidelines above for game evaluation. Leave blank any game which you have not played enough to have formed an opinion.

Please rate articles on the basis of the article itself, not your opinion of the game being reviewed. Enter a zero for any article that does not interest you.

INSIDE INDUSTRY SURVEY

Questions 1 through 11 relate to the INSIDE THE INDUSTRY survey questions as detailed on page 6 of this issue. Part I of that survey requires that you check mark the appropriate numbers (1 through 5). In part II (question 6) mark the number of the appropriate category. Questions 7 through 10 require checkmarks as per Part III. Question 11 (Part IV) requires a letter of designation.

GAMES

12. M.U.L.E. (Electronic Arts)
13. Wizardry (Sir-tech)
14. Ultima III (Sierra On-Line)
15. Archon (E. Arts)
16. Carrier Force (SSI)
17. Combat Leader (SSI)
18. One On One (Electronic Arts)
19. Knight of Diamonds (Sir-tech)
20. Lode Runner (Broderbund)
21. Pinball Construction (E. Arts)
22. Excalibur (APX)
23. Under Southern Skies (AH)
24. Space Cowboy (AH)
25. Gnosis VII (Mag. Harvest)
26. Planetmaster (Mag. Harvest)
27. Mig Alley Ace (Microprose)
28. Grey Skies, Seas (Sim. Canada)
29. **Fall Gelb** (Sim. Canada)
30. **President** Elect (SSI)
31. **Computer** Baseball (SSI)
32. **Tactical** Armor Command (AH)
33. **Robotwar** (Muse)
34. **Eastern** Front 2nd Ed. (Atari)
35. **Flight** Simulator II (Sublogic)
36. Dnieper River Line (AH)
37. Jumpman (Datamost)
38. Zork Series (Infocom)
39. Murder on the Zinderneuf (E. Arts)
40. Legionnaire (AH)
41. Telengard (AH)

MISCELLANEOUS

42. What is your age?
43. How much money do you spend per month on home computer game software?
44. What computer do you own? 1 = Apple; 2 = Atari; 3 = C64; 4 = Vic-20; 5 = IBMpc; 6 = CoCo; 7 = Other (Please specify)

Use A, B, C for "letter to editor" space. (If you write a letter to editor, please include your name, hometown, and state.)

CHIP & FERB

by Mark Eliot



FROM SSI, MORE OF THE BEST STRATEGY GAMES FOR YOUR

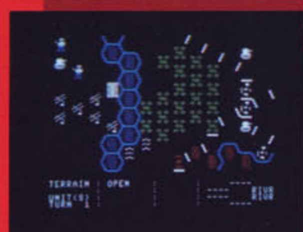
C O M M O D O R E 6 4™



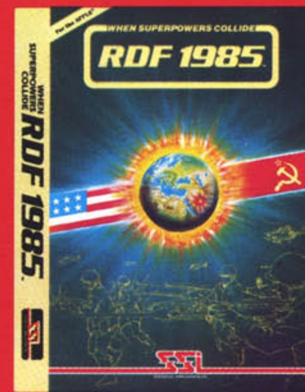


A simple and fast strategy game of power and conquest that's right up there with the classics such as chess and *go*. When you play the computer, it actually learns from you and improves with time to become the ultimate opponent. On disk. $34.95.



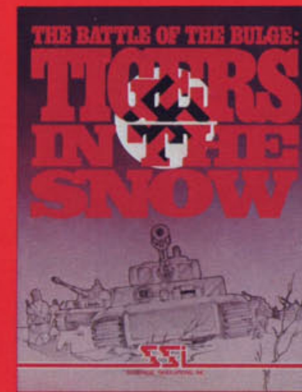


The first game in the series: When Superpowers Collide, our hypothetical projection of possible U.S.-Russia confrontations. GERMANY 1985™ simulates an invasion of West Germany by Soviet battalions. NATO forces must repel this onslaught. On disk. $59.95.



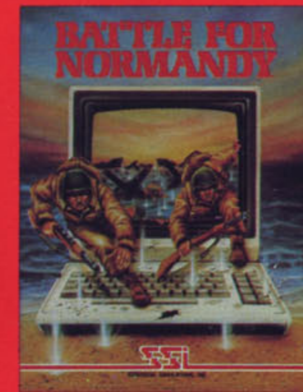


This second game in the series "When Superpowers Collide" takes you to the desert oilfields of Saudi Arabia. Soviet troops have captured these vital points, and it is up to the U.S. Rapid Deployment Force to regain them. On disk. $34.95.





As the German Commander in this re-creation of the Battle of the Bulge, you must use your deadly Tiger tanks to break through the Allied lines in the snow-covered Ardennes Forest. As the Allied leader, you must stop this German blitzkrieg. On disk & cassette. $39.95.





This game takes you to the northern coast of France for the start of *D-Day*! As the Allied Commander, you must see to it that the invasion succeeds. As commander of the German forces, you must not let history repeat itself! On disk & cassette. $39.95.

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